



SURAT MUNICIPAL CORPORATION

LIGHT & EEC

YEAR- 2019 – 2020

E-Tender (Online) Notice No: ACE (Ele.)/Light & EEC/03/2019-2020 (Work No. 3)

NAME OF WORK	: Empanelment of contractors/agencies for Unit rate work for supply, erection, testing and commissioning of street light system in various societies and TP Roads Width of 12 to 24.00 Mtr. within Surat Municipal Area.
TECHNICAL BID	
Publishing Authority:	Additional City Engineer (Ele. / Ele.& Mech.)
Inviting Authority:	I/C. Executive Engineer (Ele.), Light &EEC
Concern Office:	3 RD Floor, 117, Main Office Building, Surat Municipal Corporation, Muglisara, Surat- 395 003.
Phone:	0261- 2423751 to 56 Ex- 271, 498
E-mail:	exen.electrical@suratmunicipal.org
Type:	E-tender (website: https://smc.nprocure.com)
e-Price-bid Submission	
E-Price Bid (online):	To be submitted on or before 02/12/2019 @ 06:00 PM
Technical-bid Submission	
Tech-bid Submission (In Hard copy):	From 02/12/2019 to 10/12/2019 up to 05:00 PM
To be submitted to:	The Chief Accountant, Accounts Department, Main Office Building, Surat Municipal Corporation, Muglisara, Surat- 395 003.

FOR REVISED DATES, PLEASE REFER ADDENDA ISSUED.



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I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -

**SURAT MUNICIPAL CORPORATION****Light and Energy Efficiency Cell****Online Notice No. ACE (Ele.)/Light & EEC/03/2019-2020**Tender(s) are invited for the following work(s) through online process on <https://smc.nprocure.com> from experienced agencies.

Sr.	Name of Work	[1]	Downloading of bid documents.
		[2]	Pre bid meeting
		[3]	On line bid submission (Last date).
		[4]	Submission of bid fee, EMD & other documents etc. in hard copy.
		[5]	Bid Fee in Rs.
		[6]	EMD in Rs.
		[7]	Class of bidder.
[1]	To carry out energy audit at various sites of Surat Municipal Corporation on Annual Rate Contract basis.	[1]	21.11.2019 to 02.12.2019 up to 18:00 Hrs.
		[2]	on line queries only. Up to 27.11.2019, 17:00 Hrs.
		[3]	02.12.2019 up to 18:00 Hrs.
		[4]	10.12.2019 up to 17:00 Hrs.
		[5]	₹ 1,008.00
		[6]	₹ 12,000.00
		[7]	Experienced
[2]	Empanelment of contractors / agencies for Unit rate work for supply, erection, testing and commissioning of street light system in various societies and T.P. Roads up to 9.00 Mtr. Width within Surat Municipal area.	[1]	21.11.2019 to 02.12.2019 up to 18:00 Hrs.
		[2]	28.11.2019 @11:30 Hrs. at Conference Room.
		[3]	02.12.2019 up to 18:00 Hrs.
		[4]	10.12.2019 up to 17:00 Hrs.
		[5]	₹ 1,008.00
		[6]	₹ 8,033.00
		[7]	Experienced
[3]	Empanelment of contractors / agencies for Unit rate work for supply, erection, testing and commissioning of street light system on T.P. Roads having Width of 12 to 24.00 Mtr. within Surat Municipal area.	[1]	21.11.2019 to 02.12.2019 up to 18:00 Hrs.
		[2]	28.11.2019 @11:30 Hrs. at Conference Room.
		[3]	02.12.2019 up to 18:00 Hrs.
		[4]	10.12.2019 up to 17:00 Hrs.
		[5]	₹ 2,688.00
		[6]	₹ 45,307.00
		[7]	Experienced

- Bid documents are available on <https://smc.nprocure.com>.
- Bidders have to submit their bid in Electronic format only on <https://smc.nprocure.com> website till the last date & time for submission. Offers in physical form shall not be accepted in any case.
- Submission of Bid fee, EMD & other documents etc. in hard copy to Chief Accountant, Surat Municipal Corporation, Mugalsarai, Surat by R.P.A.D. / Speed Post only during the date and time mentioned as above. Surat Municipal Corporation shall not be responsible for any postal delay.
- The Surat Municipal Corporation (S.M.C.) reserves the right to accept or reject any or all the bids to be received without assigning any reason(s) thereof.

In case bidder needs any clarification or if training required for participating in online tender, they can contact the following office:-


(n) Code solutions – A division GNFC Ltd.

403, GNFC Info tower, Bodakdev, Ahmedabad – 380 054, Gujarat (India)

Tel: +91 25857316/17/18 Fax: + 91 79 25857321 E-mail: nprocure@gnfc.net Web-site: www.nprocure.com

Toll Free: 1800-233-1010 (Ext. 501 & 512)

For further particulars contact above office / or visit on following websites:

www.nprocure.com / www.smc.nprocure.com

 Additional City Engineer (E / E & M),
 Surat Municipal Corporation.



PART-I

MANDATORY

[BIDDER MUST COMPLY]

This section contains various vital and, mandatory information(s) from the bidder.

The bidder needs to carefully fill all the data(s) in each and every field. Duly sealed and signed must upload colour scanned copy (pdf format only) with technical bid.

If bidder fails to upload any of the copy(ies) in required format, his/ her tender will be out rightly rejected without seeking any confirmation.

All Pages of Mandatory Section, Duly Filled, Sealed and Signed, must be Submitted in Hard Copy along with Bidder's Forwarding Letter, Draft/ Banker's Cheque of Tender Fee & EMD in Original and other documents, in original or copy as mentioned.

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -



General Information about tender: -

à Table # 01: -

Name of Work	:	Empanelment of contractors/agencies for Unit rate work for supply, erection, testing and commissioning of street light system in various societies and TP Roads Width of 12 to 24.00 Mtr. within Surat Municipal Area.	
E-Tender (Online) Notice No	:	ACE (Ele.)/Light & EEC/03/2019-2020 (Work No. 3)	
Downloading of tender documents	:	From Dt. 21/11/2019 to Dt. 02/12/2019 up to 18.00 hrs.	
Last date of On-line submission of Tender along with Soft copies of Necessary Documents, Tender Fees, EMD, Certificates etc.	:	Dtd. 02/12/2019 up to 18.00 hrs.	
Last date of submission of, Tender Fees, EMD and in Hard Copy:	:	On or before Dtd. 10/12/2019 up to 17.00 hrs.	
Earnest Money	:	Rs. 45,307.00 should be paid as per tender terms.	
Pre-Bid	:	Yes [28/11/2019 @ 11:30 Hrs. at Conference room]	
Tender validity period	:	120 Calendar days from the date of opening of the price bid.	
Time of Completion	:	Quantity	Completion Period (Days)
		Up to 15 poles	45
		16 to 30 poles	60
		31 to 60 poles	75
		61 to 100 poles	90
		> 100 poles	120
Concern department/Authority	:	I/C Executive Engineer, Streetlight and EEC, Surat Municipal Corporation	
Address	:	Room No: 117, 3 RD Floor, Surat Municipal Corporation, Main Office Building, Muglisara, Surat-395 003	

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -



❖ Instructions to Tenderers: -

➤ GENERAL:

The Surat Municipal Corporation hereinafter referred to as the “Corporation” hereby invites tenders for the work as mentioned elsewhere in this tender document, as per the specifications in the tender documents. The Contract documents may be secured in accordance with the notice Inviting Tender for the said work.

➤ GEOGRAPHY:

The site is located in Surat city, is very important commercial, textile and diamond city of Gujarat State located in south Gujarat region. The city is well connected to rest of India by both Rail and Road. The City locate on bank of river Tapti and enjoy moderate climate having minimum average temperature as 25°C and extreme ranging from 45°C in summer and 10°C in winter. The actual average rainfall is approximately 80 cm distributing over three months from mid-June to mid of September.

➤ SITES:

The intending tenderer shall be deemed to have visited site and familiarized themselves thoroughly with the site conditions before submitting the tender. Non-familiarity with the site conditions will not be considered a reason either for extra claims or for not carrying out the work in strict conformity with the specifications, terms & conditions.

For site visit, the intending tenderer may contact Concern Department/Authority, as mentioned, of Surat Municipal Cooperation.

Service roads are laid up to the site of the work. These will be available to the contractor subject to any limitations imposed by SMC. However the tenderer shall visit the site and acquaint him of the approaches to the sites before tendering.

Non availability of access roads or railway siding or permits for entry of vehicles and equipment at any specific area shall in no case be the cause to condone any delay in the execution of the works or be the cause for any claims or extra compensations.

➤ SCOPE OF WORK:

The scope of the work includes all supply, erection, testing, commissioning, including supply of materials, labour and workmanship complete on turnkey basis as detailed in, specifications, terms & conditions, etc. The Contractor shall make his own arrangements for all materials required for completion of the work.

Scope of work not mentioned specifically in tender document, but required for the completion of the job shall be considered as part of the tender and shall be executed free of cost. Any site-specific work, incidental or accidental, shall be considered & included in the scope of work. Any charges/ cost to be incurred towards such work(s) shall be considered and included in the rates quoted.

➤ CONTRACT:

The entire work covered by this document viz. said work. Tenderers shall quote for this accordingly. **The quoted price shall include all taxes (excluding GST), duties, levies, overheads, insurance,**



transportation, freight, construction cess etc. whatsoever is applicable and the price shall remain firm till the completion of the project in all respect.

➤ **INCLUSION OF WORK:**

Any item of equipment equipment's/machineries or materials not shown in the specifications, drawings of as specified elsewhere, but is clearly essential to make the system operational, shall be supplied and installed by the Contractor as if it had been not shown or specified therein.

Subject, how're, to the above requirement, work that is not included in the Contract Documents shall not be performed except when approved in writing by the Engineer-in-charge / S.M.C.

The right of interpretation of each statement mentioned in this tender document which also includes all the terms, conditions, specifications etc. rest with the corporation.

➤ **BIDDERS TO CONSIDER:**

1. **The contractor shall produce latest solvency certificate (valid for minimum six months from the date of tender notice) of minimum 20% amount of the total tender value.**
2. **The permit (issued by Govt. of Gujarat) holder persons must be employed for the job.** The corporation will not be responsible for any accident or injury to the workman/ staff of the contractor. No compensation of any kind shall be paid by the corporation. The contractor shall observe latest Government rules regarding labours etc.
3. The firm should possess adequately qualified electrical personnel required for the proposed work. Presently, if party is not in possession, the clear confirmation to arrange such staff/ facilities in the event of award of contract must be furnished.
4. The firm **must possess valid electrical contractor's license issued by Government of Gujarat.**
5. The firm should have full flagged office with technical personals at Surat. He should clearly state the arrangement of staff available with them in separate sheet. Relevant sheet must be clearly filled in.
6. **All-important certificate(s)/ document(s)/ evidence(s) as specified should be duly attested/ certified by Notary. All work details should be provided with self-attested copies of evidences.**

❖ **Execution of Work after Award of Work Order: -**

➤ **Followings must be ensured on award of work:**

- (1) **Technical data sheet** of all item(s) to be tested including LED luminaires (along with driver(s), LED chip(s) to be used) should be submitted for approval.
- (2) **Quality assurance plan [QAP] for testing at manufacturer's works along with drawing of all item(s) to be tested including LED luminaires** (with all relevant/ important technical details) should be submitted for approval.

After receiving all aforesaid details/ documents, approval will be given for go ahead to manufacture/ supply. **Supply of material(s) will not be allowed before aforesaid approval(s).**



- (3) Testing shall be performed as per “DETAILED SPECIFICATIONS” for respective items. In case of LED luminaires relevant test certificate(s) including IES LM 79, LED Driver test certificate must be furnished for all models to LED luminaires/ lot(s).
- (4) If at any time, corporation express intention to test the LED luminaires or any item mentioned in BOQ/tender at any government recognised laboratory like ERDA/ UL/ ERTL/ third party NABL approved laboratory; the same shall be arranged by the bidder. In such case, only testing charges shall be paid by corporation, if the testing results are found satisfactory otherwise the same shall be borne by the supplier. Cost towards all arrangement(s) of such testing shall be borne by the supplier.

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -



DOCUMENTS TO BE FURNISHED ONLINE/ HARD COPY
(MOST IMPORTANT)

MANDATORY FOR BIDDER (WITHOUT WHICH, BID SHALL BE REJECTED OUTRIGHTLY)

NOTE: -

1. BIDDER SHALL FURNISH/FILL RELEVANT DATA/ INFORMATION AS MENTIONED IN THE TABLE BELOW.
2. EACH PAGE CONTAINING DATA/INFORMATION (AS PER TABLE) MUST BE DULY SEALED AND DULY SIGNED.
3. PROPER AND READABLE COLOR SCANNED COPY OF SUCH SEALED AND SIGNED PAGES MUST BE SUBMITTED IN SOFT COPY. IF THIS INSTRUCTION IS NOT FULFILLED, TENDER WILL BE OUT RIGHTLY REJECTED. BLACK & WHITE SCAN COPY WILL NOT BE CONSIDERED.

à Table # 02: -

Sr. No.	Description		
(1)	Name of the bidder	:	
(2)	Address	:	
(3)	GST No.	:	Proper and Readable Colour SCANNED copy, pdf/ jpg format only, to be submitted in soft copy.
(4)	PAN No.	:	-As above-
(5)	PF registration No.	:	-As above-
(6)	Authorisation letter from OEM	:	Original must be submitted with bid. -As above-
(7)	MoU with OEM	:	Original must be submitted with bid. Not Applicable in this tender. -As above-
(8)	Bidder's Affidavit	:	Original must be submitted with bid. -As above-
(9)	E.M.D. & Tender Fee Details	:	Original cheque/DD/PO must be submitted with the bid. -As above-
(10)	Solvency Certificate	:	Copy Sealed, signed and notarised, value and validity as mentioned elsewhere in tender document with the bid. -As above-
(11)	C.A's Certificate	:	Copy Sealed, signed and -As above-



			notarised showing financial turnover of last three years with the bid.	
(12)	Professional Tax paid	:	Copy Sealed, signed and notarised with the bid. Must be latest receipt .	-As above-
(13)	Partnership agreement or JV agreement (if applicable)	:	Copy Sealed, signed and notarised with the bid.	-As above-
(14)	Electrical Contractor's licence	:	Copy Sealed signed and notarised with the bid. Must be Valid.	-As above-
(15)	Undertaking of Bidder	:	Duly sealed & signed must be submitted with bid.	-As above-
(16)	Addenda corrigendum(s)	:	If applicable, duly sealed & signed must be submitted with bid.	-As above-
(17)	ALL ANNEXURES	:	Furnish properly filled, Sealed & Signed copies as per requirements.	-As above-
(18)	Special Terms and Conditions.	:	Furnish Sealed & Signed copy.	-As above-
(19)	Technical Compliance Sheet (along with data sheet and supportive document)	:	Where ever asked. (In case of items (like light fixtures) furnish for each model/type and its components).	-As above-
(20)	A list of all completed works.	:	Must be furnished along with satisfactory work completion certificates and work orders (if required to prove the work carried out). Work completed other than SMC all evidences/ documents should be notarised.	-As above-
(21)	IES file(s) for luminaires	:	To be attached with the technical-bid in soft copy only.	Without IES files, tender will be out rightly rejected.

All bidders must not specifically & submit their offer accordingly: -

- ✓ All certificates/ documents/ submission(s) should be sealed and signed by relevant authority/ authorized person/ authorized signatory only.



- ✓ Pdf/ JPG file of UL or Third Party NABL approved Indian laboratory test report(s) including IES LM 79 with latest amendment(s) (if any) for all type tests for each type of luminaries should be uploaded (with the technical bid). In absence of this document offer of such bidder will be out-rightly rejected. No dispute will be entertained at later date. The bidder must submit IES file generated from LM 79 from UL or Third Party NABL approved laboratory test report(s).
- ✓ All tests defined as “Acceptance Tests” other than IES LM 79 and IES LM 80 are allowed to carry out at Manufacturer's works. IES LM 79 must be prepared by third party NABL approved laboratory only. LM 80 report is prepared by LED Chip Manufacturer.

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -



Contractor's/ Bidder's Undertaking / Certificate

- ☞ I / we hereby declare that I / We have persuaded in detail and examined closely the specifications / general terms & conditions / special terms & conditions / important instructions / notes described in the tender documents & addenda corrigendum(s) [if any]. **I / We hereby agree to be bound by and comply with all such specifications / terms, conditions etc.**
- ☞ I / We also confirm that my / our offer is strictly in line with the tender specifications, stipulations, terms and conditions etc. and understand that in the event of any deviations, technical or commercial, my / our price bid will not be opened.
- ☞ I / We have understood the tender specifications / terms / conditions / all content of tender and particularly intent behind the content and bind my / ourselves for same.
- ☞ I/ We also confirm that, Right of the Interpretation of each statement/statements mentioned in this tender document rest with the corporation and therefore, if any items / conditions / specifications / scope of work is mentioned differently at more than one place(s) by chance, **most appropriate as decided by the Corporation will be final and binding on part of us.**

Note: - Aforesaid "Undertaking" must be furnished/ attached along with technical-bid (as colour pdf/ jpg file only), failing which offer of such bidders will be rejected out-rightly.

SEAL & SIGNATURE OF THE TENDERER: -



SPECIAL TERMS AND CONDITIONS: -

❖ THE FOLLOWINGS MUST BE CONSIDERED: -

1. Each tender must accompany with latest passport size photograph along with specimen signature of the contractor(s).
2. In the event of the tender being submitted by a partnership firm, signature of all partners must be done along with their latest photographs duly signed thereof. The partnership deed must also be attached with the tender. Power of attorney of to sign the all other documents/ certificates must be furnished failing which offer of such bidder shall not be considered.
3. The contractor(s) shall have to attach GST registration certificates with address evidences.
4. For contractor(s) paying royalties to the Government, the receipt of the same must be produced.
5. The successful contractor(s) shall be required to submit photographs, address and specimen signatures in duplicate at the time of executing the agreement. The agreement shall be executed by partner/ person who have signed the tender/ quotation.
6. Affix passport size photograph in table below: -

--	--	--	--

Specimen signature of all partners in case of partnership agency/ firm: -

1. _____
2. _____
3. _____
4. _____

Submission of registered
agreement is compulsory
in case of partnership
agency.

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -

NOTE: - PLEASE CLEARLY NOTE THAT “SPECIAL TERMS AND CONDITIONS” MUST BE RETURNED DULY SEALED & SIGNED ALONG WITH THE TECHNICAL-BID.

**TECHNICAL/ SERVICE PROFILE PERTAINING TO TENDERER: -****à Table # 03**

Sr.	Description	:-	To be filled by Contractor
1	Name of Tenderer / Contractor	:-	
2	The Applicant is a) an individual b) a proprietary firm c) a firm in partnership d) a Limited Company or Corporation	:-	
3	Attach the Organization Chart showing the structure of the organization including the name of the Directors & position of directors.	:-	
4	Name of contact person	:-	
	Address	:-	
	Contact No.	:-	
	Mobile No.	:-	
	E-mail address, if any.	:-	
	Address of Head Office.	:-	
	Address Main office in Gujarat.	:-	
	Office in Surat or nearest to Surat.	:-	
5	Are you a manufacturer/ authorized dealer/ sub dealer/ any other? (Please specify).	:-	
6	Give details about your service network	:-	
7	Minimum period for attending the call/ breakdown from the time of intimation.	:-	
8	Do you agree to all terms and conditions specified in the tender if no, please specify where and how you differ (attach separate sheet if necessary)	:-	Yes
9	Give details of technical personnel, list of tools/ tackles instruments possessed by you.	:-	
10	Completion period from the date of confirmed order.	:-	



Sr.	Description		Filled by bidder
11	Enumerate customer's list to whom such equipments are supplied, installed and commissioned by you and are in service at present (Attach separate sheet if necessary).	:- ⇒ ⇒ ⇒ ⇒	
12	How maintenance/ services will be offered. Specify clearly (i.e. from Surat office or any elsewhere).	:-	
13	If order is split, will it affect your any of terms/ conditions, guarantee period, servicing, maintenance? Mention clearly.	:-	No
14	Testing will be carried out at manufacturer's works prior to dispatch of equipment as specified earlier.	:-	Yes
15	Rates are inclusive of all <u>taxes (excluding GST), duties, levies, overheads, insurance, transportation, freight, construction cess etc. whatsoever is applicable.</u>	:-	Yes
16	Portion or percentage of the work the tenderer proposes to sub-contract (if any) in case contract is awarded.	:-	
17	For how many years has the organization been in business under its present name & style?	:-	
18	In which field of electrical Engineering do you claim specialization?	:-	
19	Details of your latest project completed.	:-	

Note:

- (i) Attach separate sheet/ sheets if where ever required.
- (ii) The Corporation will not issue any sales tax declaration form

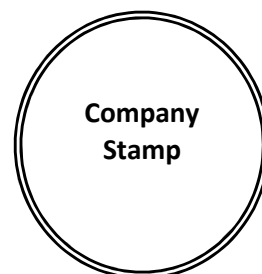
Signature of Authorized person :-

Name :-

Designation :-

Place :-

Date :-





ANNEXURE-I

à **TABLE # 04**

Experience, Registration & Solvency Certificate

1	No. of years of experience: a) as a Prime Contractor (contractor shouldering major responsibility) i) in own country ii) other countries (specify country)	
2	For how many years has your organization been in business of similar works under its present name? What were your fields when your organization was established? Whether any new fields were added in your organization? And if so, when?	
3	Have you ever left any work awarded to you incomplete? (If so, give name of work and reasons for not completing the work).	
4	Give details of your similar type of experience in implementing turnkey projects of electrical work etc.	
5	Give details of similar type of ongoing works	
6	Name of Banker with full address	
7	Amount of Solvency Certificates issued by Bankers (Attach attested copy of latest Solvency Certificate).	

SEAL & SIGNATURE OF THE TENDERER: -



ANNEXURE-II

à TABLE #05

Information Regarding Current Litigation, Debarring/ Expelling of Bidder or Abandonment of Work by Bidder: -

1	a)	Has the Applicant or its constituent partners consistent history of litigation awarded against him.	Yes / No
	b)	If yes, give details	
2	a)	Has the Applicant or any of its constituent partners been debarred / expelled by any Agency in India, during the last 5 years as on the date of application, except on account of reasons other than non-performance, such as rescinding of joint venture due to most experienced partner of joint venture pulling out, court directions leading to breaking up of a joint venture before start of work.	Yes / No
	b)	If yes, give details	
3	a)	Has the Applicant or any of its constituent partners abandoned any contract work in India during the last 5 years?	Yes / No
	b)	If yes, give details	
4	a)	Has the Applicant or any of its constituent partners been declared bankrupt during the last 5 years	Yes / No
	b)	If yes, give details, including present status	
5		Has the Applicant or any of its constituent partners been debarred by any State R & B Dept. as on the date of application	Yes / No

Note: If any information in this schedule is found to be incorrect or concealed, pre-qualification application will be summarily rejected.

SEAL & SIGNATURE OF THE TENDERER: -



ANNEXURE: III

à TABLE #06

General Data / Details of Luminaire/ Guaranteed Technical Particulars

Sr. No.	Parameters	Data/ Details/ Guaranteed Value
(1)	LED Rated Operating Current (mA)	
(2)	No(s) of LEDs (Chips) to be Used in Luminaire	
(3)	Luminaire manufacturer	
(4)	Luminaire model identification no/ name	
(5)	Rated Input of LED Streetlight luminaire	
(6)	Initial lumen output (Rated)	
(7)	Lumen output (as per LM79 report, mentioning current in mA)	
(8)	Lumen depreciation at the end of Rated Life (mentioning junction temperature 85 °C and rated current in mA)	
(9)	Rated Correlated colour temperature (CCT)	
(10)	Rated Colour rendering index (CRI)	
(11)	Material of Construction: - Luminaire Heat Sink Diffuser/ Lens	
(12)	Dimensions	
(13)	Weight	
(14)	LED Driver's make, model no. and IS Registration Number (R-Number)	
(15)	LED Driver's rated life (hours) { min. 20,000 Operating hours }	
(16)	LED chip's rated operating current (mA) {not more than 1,050 mA}	
(17)	Rated Supply Voltage of LED Luminaire (230/ 240 V only)	
(18)	Operating voltage range	
(19)	Operating Frequency Range	
(20)	Rated Power factor	



Sr. No.	Parameters	Data/ Details/ Guaranteed Value
(21)	Total harmonic distortion	
(22)	Working humidity range	
(23)	Working temperature range	
(24)	IP rating of luminaires (IP 65/ 66, whichever applicable)	
(25)	Electrical connector(s)	
(26)	Surge Voltage Level(s) in kV Internal & External, as applicable {min. 4 kV}	
(27)	Name of the LED chip manufacturer	
(28)	LED chip model name and number	
(29)	LM 80 report from the LED chip manufacturer on the lumen depreciation characteristics of the specific LED chip employed in the proposed luminaire product	
(30)	Junction temperature (°C) of LED {max. 85° C}	
(31)	Rated Life of LED Chip at L70 (min. 50,000 hours)	
(32)	LED driver Cut off Voltage/ optional arrangement (if provided)	

Note: -

- ⇒ **IES file of offered LED luminaires must be furnished in soft copy with the technical-bid; failing which your offer will be rejected out rightly.**
- ⇒ **Separated sheet(s) for all LED luminaires must be furnished as soft copy along with the technical-bid otherwise offer of such bidder will be rejected out-rightly.**

SEAL & SIGNATURE OF THE TENDERER: -



ANNEXURE: IV

à TABLE #07

Technical confirmation sheet for LED Luminaire

<p>Tenderer must study specifications carefully & confirm that his offered LED fitting is complying all the technical specifications, specified in the detailed specification. Tenderer has to confirm followings and <u>soft copy needs to be attached with the technical-bid (strikethrough, whichever is not confirmed by the bidder): -</u></p>		
(1)	Codes & Standards	Yes/ No
(2)	Environmental Conditions	Yes/ No
(3)	Constructional Features	Yes/ No
(4)	Data Sheet: Fixed & Performance Parameters	Yes/ No
(5)	General Data Sheet	Yes/ No
(6)	Power (Price) Loading	Yes/ No
(7)	Illumination Level& related parameters	Yes/ No
(8)	Penalty(ies)	Yes/ No
(9)	Details to Be Submitted by The Bidder	Yes/ No
<p>If, my/ our confirmation found fake/ wrong during verification at any stage or at any stage of contract, or after contract execution or even after defect liability period; I/ We are agreed to whatever action(s) taken by the competent authority of corporation in the aforesaid circumstances including forfeiture of security deposit, recovery of penalty amount from any pending due(s) with SMC, debarring from participation in future tenders for the period/ years as decided by the corporation and informing the same to all other state/ central level Government/ semi-government organizations.</p>		
<p>SEAL & SIGNATURE OF THE TENDERER: -</p>		



à **TABLE #08**

ANNEXURE: V

⇒ **"Bill of Quantity with estimated cost for TP Roads (12 to 24 m width) for Reference"**

⇒ **As per enclosed pdf file: [Annexure 4 1 \(Work No- 3\).pdf](#) (Total Page(s): 3)**

Particulars	ROAD WIDTH				
	12 m (Side)	15 m (Side)	18 m (Side)	18 m (Central)	24 m (Central)
Capital Cost per km (Rs.)	7,25,865.00	9,27,425.00	9,27,700.00	9,74,830.00	9,74,830.00
Grand Total (Rs.)	45,30,650.00				

Note: -

1. All works is to be carried out in the Surat city. Actual payment will be made based on the actual work completed at site.
2. Online Price Schedule(s) are contained as Price Schedule for Society Roads & TP Road.
3. BIDDER MUST NOT SUBMIT PRICE SCHEDULE IN HARD COPY. RATE MUST BE OFFERED IN ON-LINE FORM ONLY. RATE MENTIONED IN ANY HARD COPY (i.e Physical hard copy as well in form of scan copy attachment) WILL NOT BE CONSIDERED AND TENDER OF SUCH BIDDER WILL BE OUT RIGHTLY REJECTED.
4. Estimated cost to be quoted separately as % age above / below of the cost estimated as above.

SEAL & SIGNATURE OF THE TENDERER: -



ANNEXURE: VI

❖ (For bidder/ LED Manufacturer)

AFFIDAVIT

(To be given on Non-judicial stamp paper (Rs. 300.00) duly signed by authorized notary)

Name of Work: - Empanelment of contractors/agencies for Unit rate work for supply, erection, testing and commissioning of street light system in various societies and TP Roads Width of 12 to 24.00 Mtr. within Surat Municipal Area.

I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.

1. The undersigned also hereby certifies that neither our firm nor any of its constituent partners have abandoned any work in India nor any contract awarded to us for such works has been rescinded during last five years, prior to the date of this bid.
2. The undersigned hereby authorize(s) and request (s) any bank, person, authorities, government or public limited institutions, firm or corporation to furnish pertinent information deemed necessary and requested by the Surat Municipal Corporation to verify our statements or our competence and general reputation.
3. The undersigned understands and agreed that further qualifying information may be requested and agrees to furnish any such information at the request of the Surat Municipal Corporation.
4. The Surat Municipal Corporation and its authorized representative are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this application and to seek clarification from our bankers and clients regarding any financial and technical aspects. This Affidavit will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and requested by you to verify statements and information provided in the tender or with regard to the resources, experience and competence of the Applicant.
5. My/ our offer shall not be considered in case of fake/ forged document(s) found during verification at any stage or at any stage of contract. I/ we are agreed to whatever action(s) taken by competent authority of Surat Municipal Corporation in the aforesaid circumstances such as forfeiture of security deposit and debarring from participation in future tenders for the period/ years as deemed fit by the Surat Municipal Corporation and informing the same to all other state/ central level Government/ semi Government organizations.



6. I/ we confirm that my/ our (Name of the firm) is a partnership/ proprietary firm/ limited company (strike out, which isn't applicable) having registered office (Address), PAN number....., GST registration no..... It is to clarify that legal name mentioned in GST registration certificate isand trade name mentionedis The trade/ legal name has been prefixed with M/s. It is to clarify that legal name and trade name as mentioned is of the same entity.

I/We further clarify that any legal/financial/administrative issues/liabilities arising out of difference in name, if any shall be my/our responsibility and Surat Municipal Corporation shall not be liable for any financial/legal consequences arising thereof.

Signed by the authorised signatory of the firm

Title of the office

Name of the firm

Date



ANNEXURE: VII

(The Undertaking as per following format on non-judicial stamp paper of Rs. 100/- is to be furnished by contractor when asked by SMC after opening of tenders/Price bid.)

Name of Work: Empanelment of contractors/agencies for Unit rate work for supply, erection, testing and commissioning of street light system in various societies and TP Roads Width of 12 to 24.00 Mtr. within Surat Municipal Area.

Ref: - Tender Notice (online) No. ACE (Ele.)/LIGHT & EEC/ 03 /2019-2020.

Respected Sir,

We had participated for the above-mentioned work and we were qualified for the criteria mentioned in the subjected works tender.

Upon asked by Surat Municipal Corporation, we hereby give our consent with this undertaking to carry out and execute the works of Empanelment of contractors/agencies for Unit rate work for supply, erection, testing and commissioning of street light system in various societies and TP Roads Width of 12 to 24.00 Mtr. within Surat Municipal Area, if the same is awarded to us at a unit rate of _____ above/ below the estimated rates.

We hereby agree and abide ourselves and assure Surat Municipal Corporation that we will not deny to carry out and execute the work if the same is awarded to us by the competent authority of Surat Municipal Corporation at above mentioned rates and terms mentioned in the subjected work's tender, failing which, competent authority of Surat Municipal Corporation may take penalty actions like disqualifying or debarring us for future works of Surat Municipal Corporation for the period as decided by Surat Municipal Corporation upon their discretion, or any other action as decided by competent authority of Surat Municipal Corporation.

This undertaking will remain in force up to (Up to two years from the date of sanctioning of the work by competent authority of the corporation).

Sign and Stamp of Contractor.



PART-II

COMMERCIAL



IMPORTANT INSTRUCTIONS TO TENDERER

[01] NO DEVIATION IN TECHNICAL SPECIFICATION OR COMMERCIAL TERMS LIKE TERMS OF PAYMENT, COMPLETION PERIOD ETC. SHALL BE ALLOWED. SUCH DEVIATION (S), IF OFFERED WILL CAUSE THE REJECTION OF TENDER(S) OUTRIGHTLY.

[02] TENDERER TO READ AND NOTE CAREFULLY:

[A] At his own expenses and prior to submitting his tender, each tenderer shall **(a)** examine the Contract Documents **(b)** visit the sites and determine local conditions which may affect the work including the prevailing wages and other pertinent cost factors **(c)** familiarize himself with all central, State and local laws, ordinance, rules, regulations and codes affecting the material supply including the cost of permits and licenses required for the work and **(d)** correlate his observations, investigations, and determinations with the requirement of the tender documents.

[B] The documents / appendices / annexure / statements should be completed legibly in ink, checked in responsible manner, signed, stamped and returned together with the tender security Bond by the tenderer.

All the pages in which entries are required to be made by the tenderer are contained in the tender documents and the tenderer shall not take out or add to or amend the text of any of the documents or else the tender shall be rejected forfeiting the EMD.

[03] EARNEST MONEY DEPOSIT:

[A] Each tender must be accompanied by a receipt of deposit as tender guarantee (Earnest money deposit) of the amount mentioned in memorandum, in the form of crossed Demand Draft / Pay Order of Nationalized / Scheduled Bank acceptable to Corporation drawn in favour of the "Municipal Commissioner, Surat Municipal Corporation" payable at Surat. The tender bond shall be valid for a period of not less than 180 days from the date of the tenders are opened and shall comply with the requirements for Bond as stipulated in the general conditions of contract. The Corporation as a guarantee will hold the tender guarantee bond that the tenderer if awarded the contract, will enter in to the contract agreement in good faith and furnish the required bonds. Any tender not accompanied by a tender Guarantee in the form of earnest money deposit in the form of Bank Draft for the sum stipulated in the tender document will be summarily rejected.

[B] The earnest money deposit will be refunded to the unsuccessful tenderer(s) after the award of work has been finalized.

[C] The earnest money deposit (tender guarantee) will be forfeited in the event, the successful tenderer fails to accept the contract and fails to submit the performance guarantee bond to the corporation as stipulated in the tender documents within ten days after receipt of notice of award of contract. In such case corporation, may disqualify the tenderer from tendering for further works, under the jurisdiction of the corporation (SMC).



- [D] The earnest money deposit of the successful tenderer shall be returned after the performance guarantee bond, as required, is furnished by the bidder.
- [E] No interest shall be paid by the corporation on any tender guarantee / performance guarantee.
- [F] **Bank guarantee or cheque or FDR shall not be accepted for EMD / tender guarantee.**

[04] GST REGISTRATION CERTIFICATES:

Latest GST registration certificates (along with all annexure) should accompany the tender without which, the tender is liable to be summarily rejected. The GST registration number must be clearly specified.

[05] PREPARATION OF TENDER DOCUMENTS:

Tenderer(s) are requested to note the following while preparing the tender documents:

- [A] Tender shall be submitted as specified in this tender document in English. All tender items and statements shall be properly filled in. Numbers shall be stated both in words and in figures where so indicated.
- [B] Each tender shall be accompanied by the prescribed tender security bond and other required documents and drawings. All witnesses and sureties shall be persons of status and proximity and their full names, occupations and addresses shall be stated below their signatures. All signatures in the tender documents shall be dated.
- [C] Delivery of tenders shall comply with notice inviting tenders as to place, date and time.

[06] SUBMISSION OF TENDER DOCUMENT:

Bidders wishing to participate in this e-tender shall be required to procure Digital Certificate as per Information Technology Act- 2000. By using this certificate, the bidder can digitally sign his electronic bid. Bidders can procure the Digital Certificate from any of the CCA approved certifying agency or can contact M/ s (n) Code Solution at the below mentioned address who will assist in procuring the same. Bidders who already have a valid Digital Certificate need not procure it again. In case bidders need any clarification regarding online participation they can contact:

M/ s (n) Code Solution,

301, GNFC Info Tower,

Near Grant Bhagwati Hotel,

Ahmedabad-380 015.

Tel: +91-79-26857316 / Tel: +91-79-26857317 / Tel: +91-79-26857318

URL: [https:// smc.nprocure.com](https://smc.nprocure.com)



Bidders who are willing to participate in e-tender need to fill data in pre-defined forms of Tender fee, EMD (Bid Security), Qualifying Criteria & Technical Bid and Price Bid only.

Bidders should upload scan copies of reference documents in support of their eligibility of the bid. Technical-bid (except specific documents/ pages) needs not be submitted in hard-copy instead pdf file of the tech-bid/ documents must be uploaded on respective web-page in pdf format only. After filling the data in pre-defined forms, bidders need to click on final submission link to submit their encrusted bid.

Bids shall be submitted as below:

- ⇒ EMD & Tender Fee along with proof of Qualifying Criteria in pre-defined forms, tender papers & certificates (except specific pages, which must be furnished in hard-copy) in electronic mode.
- ⇒ **Price Bid must be submitted online only.**

Note: Price bid in physical form (in hard copy) will not be accepted.

The direct or indirect mention regarding cost in technical-bid shall not be allowed.

The documents shall be submitted in **one set** in the following manner:

- [a] Set of documents shall be put in a **separate sealed cover. Name of the Work, Tender Notice No. and full name and address of the bidder shall be written clearly on the sealed cover.**
- [b] **The Bank Draft for EMD shall be put in a separate envelope subscribed as “EMD” on top of the cover. Tender fee amount (DD) shall be put in the same cover.**

The documents along with the envelope containing EMD shall be put inside one large envelope, sealed and clearly super scribed on top of the packet name of the work & tender notice no. Name and full address of the bidder shall be written on the bottom left corner of each envelope. Due date of Receiving the tender shall also be mentioned on the envelope. This cover must be super scribed as “Technical Bid Cover”.

The hard copy as above should be sent to the Chief Accountant, Surat Municipal Corporation, Muglisara, Surat 395 003 by RPAD & Speed Post only as per the dates mentioned in the tender notice. SMC shall not be responsible for any postal delay.

DOWNLOADING OF TENDER DOCUMENT:

The tender document for this work is available only in Electronic format, which can be downloaded free of cost by the bidder. Tender documents consist of two parts (i) technical bid with qualifying requirements (ii) Price bid.

INFORMATION FOR ON LINE PARTICIPATION:

- [i] Internet site address for e-tender activities will be [https:// smc.nprocure.com](https://smc.nprocure.com).
- [ii] Interested bidders can view detailed tender notice and download tender document from the above-mentioned website.



- [iii] Bidders who wish to participate in online tender have to register with the website through the “New User Registration” link provided on the home page. Bidder will create login id & password on their own in registration process.

Tenders by partnership firm must be signed by all partners. The full name and addresses of all the partners shall be furnished. The tenders by Corporation / Companies must be signed with the legal name of the Corporation/ Company by the president / or by the secretary or other person or persons legally authorised to bind the Corporation / Company in the matter.

PRICE BID IS NOT TO BE SUBMITTED IN PHYSICAL FORM. PLEASE NOTE THAT NON-SUBMISSION OF PRICE BID DOES NOT ABSOLVE THE BIDDERS FROM ANY LIABILITY CREATED FROM THE BID CONDITIONS AND BIDDING PROCESS. ENTIRE TECHNICAL-BID NEED NOT BE SUBMITTED; HOWEVER, UNDERTAKING AS PER CHECK LIST MUST BE SUBMITTED DULY SEALED & SIGNED AS A TOKEN/ ACKNOWLEDGEMENT OF STUDYING & UNDERSTANDING THE ENTIRE TECHNICAL BID CAREFULLY & INTENDED PURPOSE OF THE WORK.

[07] TENDER VALIDITY PERIOD:

The validity period of the tender submitted for this work shall be **of one hundred twenty (120) calendar days from the last date of submission of the price bid** and, that the tenderer shall not be allowed to withdraw or modify the tender offer on his own during the validity period. The tenderer will not be allowed to withdraw the tender or make any modifications or additions in the terms and conditions of his tender. If this is done then the corporation shall, without prejudice to any right or remedy, be at liberty to reject the tender and forfeit the earnest money deposit in full.

GENERAL PERFORMANCE DATA:

Tenderer(s) shall submit all the information, which is sought for in the tender documents in the form of various schedules. Tenders may not be considered if left blank or the schedules are not properly filled in before submissions of the tender.

[08] SIGNING OF TENDER DOCUMENTS:

- [a] Documents clarifying type of business (as applicable), e.g. Self-declaration in case of proprietary firm, Partnership deed in case of Partnership firm, Power of attorney and deed of “karta” in case of HUF, Certificate of incorporation issued by registrar of companies in case of private/public limited companies etc.
- [b] Undertaking on Rs 300 Non-Judicial notarised stamp paper, by bidder, confirming that bidder is not Black listed in any central government/state government/ local self-government organisation or municipal Corporations etc.



INDIVIDUAL	SOLE PROPRIETORSHIP	HUF	PARTNERSHIP	COMPANY	SOCIETY	CO- OP. SOCIETY	TRUST
1. Self Attested Copy of PAN Card of Individual			1. Certified Copy of Partnership Deed	1. Memorandum & Articles of Association	1. Certificate of registration issued by Registrar of Societies	1. Certificate of registration issued by Registrar of Co-operative Societies	1. Certified copy of the Trust Deed
			2. Documents to be signed by a Partner, on the basis of a resolution signed by all the other partners.	2. Certificate of Incorporation	2. Memorandum of Association and By- Laws.	2. Bye- Laws	2. Documents to be signed by a Trustee on the basis of a resolution signed by all the other Trustees.
			3. Self Attested Copy of PAN Card of Partnership Firm	3. Form 32 for all Directors	3. Documents to be signed by a Chairman/ President, Authority given on the basis of resolution of the Managing Committee	3. Documents to be signed by a Chairman/ President, Authority given on the basis of resolution of the Board of Directors	3. Self Attested Copy of PAN Card of Trust
				4. Documents to be signed by a Director on the basis of a resolution of the Board of Director		4. Self Attested Copy of PAN Card of Society	
				5. Self Attested Copy of PAN Card of Company			
				6. Board Resolution letter			

All witnesses and sureties shall be persons of status and proximity and their full names, occupations and addresses shall be stated below their signatures.

[09] WITHDRAWAL OF TENDERS:

If, during the tender validity period, the tenderer withdraws his tender, the tender security (earnest money) shall be forfeited and the tenderer may be disqualified from tendering for further works under the jurisdictions of the SURAT MUNICIPAL CORPORATION.

[10] TAXES AND DUTIES:

Prices quoted must be inclusive of all taxes (excluding GST), levies, work contract tax, packing/ forwarding, transportation, freight, watch & ward, insurance Construction cess etc.

The Municipal Corporation will not issue "C" or "D" form.

GST (GOODS & SERVICE TAX) has come in to existence from 1st July 2017. Contractor/ Successful Bidder are bound to pay the amount of GST prescribed by the Govt. Of India as per the Terms of Contract agreed upon during the course of execution of this Contract.

During the course of execution of Contract, if there is any change in rate of GST (GOODS & SERVICE TAX) by the Government the same shall be reimbursed/ recovered separately by SMC, subject to the submission of original Receipt/ Proof for the amount actually remitted by the successful bidder/ Contractor to the competent Authority along with a certificate from chartered Accountant of Contractor/ Successful Bidder certifying that the amount of GST paid to the Government and the same shall be intimated/ submitted/ claimed within 30



(Thirty) Days from the sole responsibility of the Successful bidder/ Contractor, failing which, SMC may recover the amount due, from any other payable dues with SMC. Further the non-payment of the GST to the Government may lead to the termination of contract and forfeiture of Security Deposit/ Performance Guarantee Amount.

TDS of GST shall be deducted as per the act/rules from the bills of the contractor.

The Contractor shall be liable to the payment of all the Central/ State/ Local Body's Levies, taxes or duties etc. The SMC shall neither bear it nor reimburse at any time but will ensure deduction of Central/ State/ Local levies and taxes at Source at the rate provided under the relevant statutes from time to time in force. Further the work contract tax or sale tax shall be borne by the Contractor as per Rules and Regulations of Government.

Any increase or decrease in taxes/ duties or imposition of any new taxes/ duties shall be on account to the Corporation and such increase/ decrease shall be paid/ recovered to/ from the Contractor on producing documentary evidences only. The contractor shall be the sole responsible for payment of such incidentals to the concerned Government department which he has collected from the Corporation. This provision is limited for Schedule-B of the tender.

As per government G.R. Building and other construction work welfare cess act-1966 labour and employment development G.R. No. CWA/ 2004/ 841/ M-3, Dt-30/ 01/2006 **contractor shall have to pay 1% cess on every bill amount.**

[11] TIME REQUIRED FOR COMPLETION FOR WORK:

- [01]** Entire work shall be completed in all respects within completion period (as mentioned elsewhere in tender) **from the date of work order/Letter of Intention. Rate(s) must be quoted/ offered accordingly.**
- [02]** The completion period of the job shall be subject to site clearance due to monsoon or other reasons or due to work permission not given by SMC. In any case, it shall not be subjected to any reasons attributed to contractor.
- [03]** **Any deviation in completion period specified in the technical-bid shall not be accepted and such tender shall not be considered.**

[12] PRICES AND PAYMENTS:

The tenderer must understand clearly that the prices quoted are for the total works and include **all costs due to materials, labour, equipment, supervisions, other services, royalties, works contract tax, construction cess, all type of taxes (excluding GST), levies duties, Construction Cess etc.** No claim for additional payment beyond the prices quoted will be entertained and the tenderer will not be entitled subsequently to make any claim on any ground.

- 1) The payment shall be made considering the actual measurement of each item executed multiplying the rate per unit sanctioned for each item.
- 2) The contractor is bound to carry out the work for any item mentioned above.
- 3) **The competent authority of the corporation reserves the right of reducing the scope of work by deleting any of the above items.**



- 4) The detailed specifications for each item shall remain firm as specified in the tender documents (Technical Bid).

TERMS OF PAYMENTS:

No payment shall be made in advance. The Corporation shall not under any circumstances relax the terms of payment and will not consider any alternative terms of payment. Tenderer should therefore in their own interest note this provision to avoid rejection of their tender.

Seven percent **(7%)** shall be retained from every running bill as retention money and shall be released in Final Bill, after of satisfactorily completion of SETC work.

- ❖ Security deposit shall be released after final takeover of the installation after expiry of defect liability period as well as satisfactory clearance from Audit department.
- ❖ All payments shall be made as per prevailing rules/regulations of SMC.
 - i. In case site access is not available within three months from the date of completion of supply period than 5% of quoted value shall be released against submission of a Bank Guarantee for equivalent amount.
 - ii. Further, if in another three-month, site access is still not available further 5% of quoted value shall be released against submission of a Bank Guarantee of equivalent amount.
 - iii. This means that, in case site is not clear within 06 months of completion of supply period, tenderer shall be paid additional 10% of quoted value in total.
 - iv. The contractor shall have to submit bill in duplicate along with documents as mentioned elsewhere in this tender document for the activities completed. The payment should be made as per the actual work done and actual measurement of each item done on site.

[13] OPENING OF TENDER DOCUMENTS

The Technical Bid will be opened in the office of the competent authority, Surat Municipal Corporation, Surat, if possible, on next working day of last date of receipt at 16:00 Hours. Bidders or their representative who wish to participate in tender opening should remain present at Concern department/authority-Surat Municipal Corporation. Only one representative of each firm will be allowed to remain present.

Technical bid cover containing Technical Bid papers/ documents & EMD will be opened first and relevant details will be read out.

The bidders who fulfil the requirements of the qualifying criteria & technical-bid, price-bid of such bidders will be opened.



- [14] The price bid which is quoted online on web site <https://www.nprocure.com> or <https://smc.nprocure.com> will remain unopened till the technical bid of all tenderer are as per technically at par.

[15] **EVALUATION OF TENDER**

After opening of the technical bid, SMC will examine the technical bid thoroughly. The bidder must fulfil all eligibility criteria.

However, tender will be opened for the bidder who qualifies for all terms/ conditions. If bidder is disqualified on any ground, tender for the same will not be opened. For eligibility of opening of price-bid, all criteria should be fulfilled.

- [16] The bidder is required to furnish all details, literature, certificates etc. as per specifications, terms & conditions, which is must.

[17] **Corrupt and Fraudulent Practices: -**

- [a] The Employer (SMC) requires that bidders/ contractors under this contract **observe the highest standard of ethics during the procurement and execution of this contract. In pursuance of this policy**, the Authority; Defines, for the purpose of these provisions, the terms set forth below as follows:

- [i] corrupt practice: means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
- [ii] fraudulent practice means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- [iii] Will reject a proposal for award of work if Employer determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.
- [iv] Will declare a Bidder ineligible, either indefinitely or for a stated period of time, to be awarded a SMC contract/contracts if he at any time determines that the Bidder has engaged in corrupt or fraudulent practices in competing for, or in executing, the contract.

- [b] The Employer will reject a proposal for award if he determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question. The Employer will declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract by Surat Municipal Corporation if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for the contract, or during execution.



[18] OPENING OF PRICE-BID:

The tenderer who's technical-bid is found as per terms and conditions and achieving the performance parameters as per tender terms & conditions may be allowed to remain present during the opening of the price-bid. The successful tenderer of technical bid, who choose to remain present may attend price bid opening and price break-up will be readout at that time. The competent authority of SMC reserves the right to open/ seal/ accept/ reject any tender without assigning any reasons thereof.

Price Bid(s) of Tenderer, who do not meet the technical requirements of the tender, will not be opened.

[19] Acceptance of tender will rest with the competent authority of the corporation. It does not bind SMC to accept the lowest tenderer and reserves the right to reject any or all tenders and no reasons will be given for acceptance or rejection thereof. The tenderer whose tender is accepted should enter into a regular contract agreement and to abide by all rules and regulations embodied in the tender.

[20]

TIME REQUIRED FOR COMPLETION FOR WORK	As per work completion schedule mentioned in Table #01
TERMS OF PAYMENTS:	<p>(i) 70% of equipment(s) quoted value after satisfactory delivery/ acceptance of material and after, submission of invoice.</p> <p>(ii) 25% of equipment(s) quoted value after satisfactory commissioning of all the equipments and after, submission of invoice.</p> <p>(iii) Remaining 5% of equipment(s) quoted value after satisfactory completion of whole work in all respects as a final bill.</p>

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -



QUALIFICATION CRITERIA

The qualification process will lay high emphasis on the ability and competency of contractors to do high quality work within the given time schedule. The following criteria along with other conditions/ criteria shall be applicable to Bidder.

- [01] Average annual financial turnover of Bidder during the **last 3 years, ending 31st March of the previous financial year should be at least 30% of total estimated cost.**
- [02] **Experience of having successfully completed “similar works”(defined below) during last 7 years ending last day of month before the one in which tenders are invited should be either of the following:**

Work Completion Certificate(s) {WCC} Required for Similar Work Value. [3A form only will be considered]	Min. Nos. of WCC [Work(s) Completed.
80% of Total Estimated Cost	01
50% of Total Estimated Cost	02
40% of Total Estimated Cost	03

(Appropriate evidence(s) like work completion certificate(s) with work order(s) must be provided).

- [03] Following enhancement factors will be used for the cost of works executed and financial figures to common base for the value of the works completed in India: -

Year	Financial Year	Multiplying Factor
One	2018-19	1.10
Two	2017-18	1.21
Three	2016-17	1.33
Four	2015-16	1.46
Five	2014-15	1.61
Six	2013-14	1.77
Seven	2012-13	1.95

- [04]

Last 3 years to be considered for Average annual financial turnover 2016-17,2017-18,2018-19

“Similar work” signifies SETC of Streetlight system. In case of work is combined with other work, documents should prove that Streetlight Capital work is being carried out with amount as per requirement.

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -



MOST IMPORTANT CONDITIONS OF THE UNIT RATE CONTRACT

- (1) Tenders are invited for Empanelment of contractors / Agencies for supplying, erection, testing and commissioning of street light system (for Unit rate work) as mentioned.
- (2) The bidder is required to understand clearly the purpose of the tender, which are as below.
 - Empanelment of contractors / Agencies work for supplying, erection, testing and commissioning of street light system (for Unit rate work) as mentioned.
 - Consider the rates as UNIT RATE for all similar type of job/ items required to be executed in future till further revision of rates. These unit rates, so fixed do not entitle the bidder/ bidders to get future job automatically.
 - The separate procedure to seek consent/ undertaking from various contractors/ bidders to execute the future works as per the fixed unit rates and award the work to any specific contractor as per decision of competent authority as per SMC norms shall be followed.
- (3) Once the unit rates are fixed, for future requirement of various sites/ works of zones of Surat Municipal Corporation, relevant group of registration for different works as per the work amount shall be considered while allotting the works as per fixed/ sanctioned unit rate.
 - Contractors will be empanelled according to their capacity to work in groups as mentioned below who are qualified as per qualification required and even not qualified due to technical reasons like failure of fittings during testing or non-matching of fittings etc.
 - The empanelled contractors can do work as per unit rate sanctioned, if awarded with the any of the qualified model of fittings with energy loading if applicable.
 - Group of registration is formatted by SMC, with consideration of work completion certificates submitted by the contractor during bidding of the tender.
 - For various groups as described below for the grouping of contractors, guideline (as mentioned in the tender under qualification criteria will be considered for the evaluation of contractor eligibility for future requirement of various sites/ works of zones of SMC.
 - Group of registration for empanelment of contractor for unit rate:
 - a) below 05 lakh, b) below 10 lakhs, c) below 25 lakhs, d) below 50 lakhs, e) below 1.0 cr.
- (4) **The rates sanctioned shall be considered as a unit rates for prefixed period of min. 2 (Two) year from the date of work order of the corporation.**
- (5) **The rates sanctioned for the work shall also be considered as Unit rates to execute the renovation works of the entire system as well. The all rates sanctioned shall be considered as a unit rates for pre-fixed period of min. 2(Two) years from the date of resolution sanctioned by the competent authority of the corporation.**
- (6) **Contractor(s) who have submitted their offer shall only be eligible for carrying out the all kind works under consideration. The work shall be allotted by the concerned department after sanctioning the work(s) under consideration by the competent authority of the corporation.**
- (7) **The competent authority of the corporation reserves the right to include other contractor(s) at later date subject to their techno-commercial capabilities.**



- (8) Tenderer must make his own arrangement for watch and ward of material supplied till it is commissioned satisfactorily at site and handed over to the corporation. Corporation will not be responsible for theft of materials till it is commissioned satisfactorily and handed over to the corporation even if part payment is released.
- (9) Defect liability period will be 12 months from the date of satisfactory commissioning. After successful commissioning, entire system shall be handed over to O & M Contractor of the respective Zone/ Sub Zone. However, spares/ components of streetlight system under the defect liability period shall be provided by the contractor, who has installed the system. Therefore, the rates must be quoted accordingly and no dispute will be entertained at later date.
- (10) **If, contractor fails to supply required spares of any component within five days of intimation then, following penalty shall be charged and recovered from his pending bills / security deposit or from any other pending amount / any other works in SMC.**
- a) If contractor supply spares for any component of system within five days, NO penalty.**
 - b) If contractor supply on sixth day, penalty for first five days will be Rs.100.00 per day.**
 - c) For sixth to ten days, penalty will be Rs.200.00 per day.**
 - d) After tenth days, SMC shall order O & M contractor to supply spares on chargeable basis & this charge(s) plus penalty for ten days (Rs.1500.00) shall be recovered from the SITC contractor.**
 - e) Above penalty shall be recovered on per complaint basis.**
- (11) The works of SETC of new street light system mentioned in tender shall be allocated to lowest tenderer as per capability or as per decision of competent authority of the corporation and the competency (financial & experience) of tenderer. The lowest offer shall be considered and fixed as the unit rate for entire system (new work/ entire system renovation work) as well as individual item (for all mentioned items in the tender), if found appropriate. All contractors should note the same and participate/ offer the self-supporting rates accordingly.
- (12) The TENDER GUARANTEE paid against this tender shall be retained till submission of performance guarantee on award of contract. For future works separate TENDER GUARANTEE shall be deposited while giving consent for carrying out the work as per fixed/ sanctioned unit rates, which shall be retained till submission of performance guarantee on award of contract. The earnest money deposit will be forfeited in the event; the successful contractor denies to accept the contract and fails to submit the performance guarantee bond to the corporation as stipulated in the tender documents within ten days after receipt of notice of award of contract.
- (13) For any extra item required to be executed and not mentioned in the tender, payment for that item(s) shall be made as per the sanctioned average.
- (14) All equipment/ materials / accessories are to be supplied by contractor and to be erected by contractor. No tools-tackles / machinery/ manpower will be provided by the Corporation. No change in units shall be allowed.
- (15) Entire lighting system installation with methodology shall have to be got approved before commencement of actual work on site. Map/ installation drawing needs to be provided with actual work done/ quantities of materials/ equipment supplied/ installed with table after commissioning.



(16) **TESTING OF LED LUMINAIRE AT SITE: -**

- a. Testing shall be carried out for the model(s), whose work order is finalized as well as for all the bidder whose fitting are eligible (qualified fitting models which met with tender requirement).
- b. Site performance testing of offered model of LED luminaries shall be done after award of work order within 7 days of the date of order/ as intimated for all the eligible fittings (qualified fitting models which met with tender requirement).
- c. Bidder should arrange min. **three samples** each of quoted luminaire in the technical-bid. The testing shall be done through Government recognized laboratory for which prior approval must be sought from SMC. Measurement shall be done as per European standard CIE: 140-2000 with latest amendment(s). Illumination level, Uniformity ratio and transverse uniformity etc. should be as per **table # 10**.

Note: -

- (1) 3% downward value shall be allowed for calculated uniformity ratio i.e. min. value of Uniformity Ratio(s) x 97%. **No relaxation shall be given in this matter.** Hence, tenderer is requested to offer their luminaire accordingly.
- (2) **Re-measurement of luminaire shall be done on fair technical ground only once.** However, **all testing & arrangement must be done the contractor & all applicable charges should be borne by the contractor in all cases.** No dispute shall be entertained at later date.

Further, luminaire input power at rated voltage should not be exceeded max. input power limit as mentioned in the technical-bid.
- (3) **IN EVENT OF FAILURE OF SITE TESTING AS MENTIONED ABOVE, SAID OFFERED MODEL WILL CONSIDERED AS "DISQUALIFIED" AND SUCH BIDDER SHALL SUPPLY THE OTHER QUALIFIED MODEL OF FITTINGS WITH ENERGY LOADING IF APPLICABLE. FURTHER, IN CASE OF REFUSION OF DOING SO, EARNEST MONEY DEPOSIT / SECURITY DEPOSIT OF THE BIDDER WILL BE FOREFITTED.**
- (4) **NO REFUND OF EXPENSE(S) INCURRED WILL BE GIVEN BACK TO THE CONTRACTOR.**

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -



GENERAL TERMS AND CONDITIONS

- [01] It should be clearly noted that payment of earnest money deposit & Tender fee either by pay order or demand draft only is must for consideration of the tender. TENDER GUARANTEE & Tender fee in any other form like cash, cheque, Bank guarantee etc. shall not be accepted. Tender without TENDER GUARANTEE & Tender fee shall be out rightly rejected. The demand draft or pay order should be in the name of "MUNICIPAL COMMISSIONER, SURAT MUNICIPAL CORPORATION" only and must be enclosed with the tender. The pay order/ demand draft should be valid for minimum 180 days.
- [02] The tenderer/ contractor shall also attach with the tender the copy of Registration in SMC or any other Government/ Semi Government department, the latest sales tax registration.
- [03] The work must be completed in all respect within stipulated time period as mentioned in Important instruction to bidder, failing which penalty @ 0.2% of order value of unexecuted portion per day of delay subject to maximum 10% of order value shall be charged and shall be deducted from the bill or any outstanding payment. Also, if contractor fails to execute the work than action against contractor will be taken as per decision of competent authority of SMC and that should bind to contractor.
- [04] Quantities shown in the tender are approximate and no claim shall be entertained for quantities of work executed being either more or less than those mentioned in the tender.
- [05] Disputes, if any, referred to the court, shall be subject to Surat jurisdiction only.
- [06] List of reputed customers/ similar works executed must be furnished with the tender.
- [07] The supply shall be done during working days between 8.00 A.M. to 6.00 P.M. only. If the contractor intends to work in holidays or outside working hours specified, he shall take prior written permission from Engineer in charge/ Zonal officers.
- [08] The material/ equipment offered by the tenderer must carry an un-conditional guarantee of minimum one year from date of commissioning or 24 months of date of satisfactory supply at site, whichever finishes earlier. The amount of performance guarantee shall be retained till expiry of satisfactory guarantee period. During the defect liability period, all necessary spare(s)/ material(s) required will be supplied/ arranged by contractor.
- [09] During defect liability period, if any spare(s)/ material(s) found defective than same should be repaired or new spare(s)/ material(s) is to be replaced. In no case second hand/ used material/ equipment wouldn't be allowed.
- [10] The terms of payment shall be as specified earlier in important instruction to tenderer. The corporation shall not accept advance payment term. All payments are subject to income tax, construction cess, GST etc. at source as per prevailing rules. All payments shall be made by A/C Payee cheque of any schedule bank Surat branch only or as per prevailing rules/ regulations of SMC.
- [11] **The validity of the tender should be minimum 120 days from the last date of submission of the tender (Price-Bid).**
- [12] The technical illustrative literatures with sketches, if required, giving full details for each item must be enclosed with the tender clearly indicating the model quoted.



- [13] The successful Supplier shall be required to deposit an **amount equal to 5% (2.0% in case of SITC works) of the total order value** as **Security Deposit** in Municipal Treasury in Cash/ by Demand Draft (**up to Order value of Rs. 2.0Cr.**) or in cash/ DD/BG/FDR (For Order value exceeding Rs. 2.0Cr.) in the name of “Municipal Commissioner, SURAT MUNICIPAL CORPORATION”, of any Nationalized Bank, (The Surat People's Co. Op. bank, IDBI bank, Axis bank, HDFC bank and ICICI bank are allowed) Surat Branch only, within 10 (Ten) days of order failing which penalty @ 0.065% of the Security Amount per day of delay shall be charged. The successful Contractor shall also be required to enter into contract agreement along with undertaking and local surety on Gujarat Stamp Paper purchased from Surat worth Rs. 300.00 for Each (To be brought by the contractor) on getting the order. If security deposit in form of FDR, the Bidder shall have to become the contract agreement on non-judicial Gujarat stamp paper of amount of 4.92% or Prevailing amendment of Government or norms of government for security deposit amount.
- [14] The rates for all individual items should be filled in the price schedule and all the tender documents duly filled in wherever necessary and tender papers duly signed wherever specified must be returned. If any page is taken out or tender papers are not returned or any change is made in tender papers, the TENDER GUARANTEE shall be forfeited rejecting the offer out rightly. Tenderer may attach separate sheet for any remarks or specifications if they intend to specify along with the tender only.
- [15] Unless specified the equipment must comply with relevant IS, which must be specified.
- [16] Sealed Technical Bid duly super scribed with tender notice number and due date must reach the office of the Chief Accountant, Surat Municipal Corporation, Muglisara, Surat-395 003 on or before the date mentioned in the memorandum by Registered post or Speed post only. Tender sent through Angadia/ courier or Hand delivery shall not be accepted. The Technical Bid shall be opened on the next working day if possible, at 4:00 PM in presence of intending tenderer. **The corporation shall not be responsible for postal delay.**
- [17] Conditional tenders shall not be accepted.
- [18] No correction, overwriting erasures in filling tender papers shall be considered unless countersigned.
- [19] **In case of any misunderstanding due to interpretation of any terms, conditions or specifications the decision of Municipal Commissioner, Surat Municipal Corporation, Surat shall be final and binding on the part of contractor.**In unnecessary queries raised verbally/ and/ or in writing shall be treated as “Fraudulent Practice(s)” and action(s) deemed shall be taken against such bidder(s) will be taken after taking due permission of Municipal Commissioner.
- [20] The contract shall be constituted according to and subject to laws in India and State of Gujarat and under the jurisdiction of courts of Gujarat at Surat only.
- [21] The correctness of each detail given in the tender documents is not guaranteed. The contractor shall independently obtain all necessary information for quoting/ offering the tender. The contractor shall be deemed to have examined the contract documents, to have generally obtained his own information in all matters that might affect the tendered rates.



- [22] Any Error in description does not relieve the contractor from executing the work according to the specifications, terms & conditions. Tender documents must be viewed in totality. If there is contradiction in any specification(s)/ General terms/ Conditions, appropriate as decided by the department/ municipal commissioner will be final & binding to contractor/ bidder(s).
- [23] No officer, Employee of Municipal Corporation is admitted to any share or part of this contract to any benefit that may rise there from.
- [24] Tender documents are not transferable.
- [25] The competent authority of Surat Municipal Corporation reserves the right to reduce the scope of work without assigning any reason even after award of contract.
- [26] Corporation will not defray expenses incurred by tenderer in tendering.
- [27] After completion of job, contractor shall submit the test reports, technical literatures, wiring diagram, operation and maintenance manual, complete installation drawings etc. All these shall be printed and bound in book form. Payment shall be released only on receipt of this volume.
- [28] Price variation clause of any form shall not be accepted. Price shall remain firm till execution of work in all respects till the release of security deposit.
- [29] Any damage to any service or accident in carrying out the works pertaining to this contract shall be to contractor's account.
- [30] **INSURANCE:**
Contractor shall be responsible, at his own expenses for confirming to and complying with all existing laws and regulations to protect his personnel against job connected accidents and third party claim against property damage as well as for the death and injury arising out of any action on the part of the contractor personnel while engaged in the performance of duties in connection with the contract.
- [31] **TERMINATION FOR UNSATISFACTORY PERFORMANCE:**
If the corporation considers that the performance of the contractor is unsatisfactory or not up to the expected standard, the corporation shall notify the contractor in writing and specify in detail the cause of dissatisfaction. The corporation shall have the option to handover this work to other agency(ies) at risk & cost of the contractor and terminate this contract if the contractor fails to comply with the requisition contained in the said written notice issued by the corporation to the contractor within fifteen days of the receipt thereof. Decision of the competent authority shall be final regarding deduction of performance guarantee or release the performance guarantee.
- [32] Any other details, if required can be obtained from the office of the Concern department/authority, on request and prior to submitting the tender. No dispute at a later date shall be entertained.

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -



CONDITIONS OF CONTRACT

1. PAYMENT AT REDUCED RATE

The rates for several items of the work agreed to within shall be valid only when the item concerned is accepted as having been completed fully in accordance with the sanctioned specifications. In cases where the items of works are not accepted the Engineer-in-charge may make payment on account of such items at such reduced rates as he may consider reasonable in the preparation of final or on account bills.

2. STORES SUPPLIED BY SMC

If the specification or estimate of the work provides for the use of any special description of materials to be supplied from the Municipal Store or if it is required that the contractor shall use certain stores to be provided by the Engineer-in-charge (such materials and stores and the prices to be charged thereof as hereinafter mentioned being so far as practicable for the convenience of the contractor but not so as in any way to control meaning or effect of the contract specified in the schedule or memorandum hereto annexed) the contractor shall be supplied with such materials and stores as may be required from time to time to be used by him for the purpose of the contract only and the value of the full quantity of materials and stores so supplied shall be set off deducted from any sums then due, or thereafter to become due to the contractor under the contract, or otherwise or from the security deposit, or the proceeds of sale thereof shall be deposit is held in Government securities the same or a sufficient portion thereof shall in that case be sold for the purpose. All material supplied to the contractor shall remain the absolute property of Municipal Corporation and shall on no account be removed from the site of the work, and shall at all times be opened to inspection by the Engineer-in-charge. Any such materials unused and in perfectly good condition at the time of completion or determination of the contract shall be returned to the Municipal Corporation store, if the Engineer-in-charge so requires by a notice in writing given under his hand, but the contractor shall not be entitled to return any such materials except with such consent and he shall have no claim for compensation on account of any such materials supplied to him as aforesaid but remaining unused by him or for any wastage in or damage thereto.

3. ALTERATION IN SPECIFICATIONS

The Engineer-in-charge shall have right of alternation in power to take any alteration in, or addition to specifications the original specifications, drawings, designs and design not instruction that may appear to him to be necessary to invalidate or advisable during the progress of the work, and contractors. the contractor shall be bound to carry out the work in accordance with any instructions in this connection which may be given to him in writing signed by the Engineer-in-charge and such alteration shall not invalidate the contract and any additional work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respect on which he agreed to do the main work and at the same rates as are specified in the tender for the main work. And if the additional and altered work includes any class of work for which no rates are specified in this contract than such class of work shall be carried out at the rates entered in the schedule of rates of Municipal Corporation or at the rates mutually agreed upon between the Engineer-in-charge and the contractor whichever are lower if the additional or altered work for which no rate is entered in the schedule Rates for works of Rates of Municipal Corporation is ordered to be not entered in carried out before the rates are agreed upon then estimate or the contractor shall, within seven days of the schedule of date of receipt by him of the order to carry out rates of the work, inform the Engineer-in-charge of the Municipal rate which it is his intention to charge for such Corporation. class of work and if the Engineer-in-charge does not agree to this rate he shall by notice in writing be at liberty to cancel his order to carry out such class of work, and arrange to carry it out in such manner as he may consider advisable provided always that if the contractor shall commence the work or incur any expenditure in regards thereto before the rates shall have been determined as lastly herein before mentioned, then in such case he shall only be entitled to be paid in such case he shall only be entitled to be paid in respect



of the work carried out or expenditure incurred by him prior to the date of the determination of the rate as aforesaid according to such rate or rates as shall be fixed by the Engineer-in-charge. In the event of a dispute, the decision of the Commissioner will be final.

Where, however, the work shall have to be executed according to the designs; drawings and specifications recommended by the contractor and accepted by the competent authority the alteration above referred to shall within the scope of such designs drawings and specification appended to the tender.

The time limit for the completion of work shall be extended in the proportion that the increase in its cost occasioned by alterations or addition consequence of the cost of the original contract work, and the certificate of the Engineer-in-charge as to such proportion shall be conclusive.

4. NO COMPENSATION FOR ALTERATION OR RESTRICTION OF WORKS TO BE CARRIED OUT

If at any time after the execution of the contract documents the Engineer-in-charge shall for any reason whatsoever, require the whole or any part of the work as specified in the tender to be stopped for any period or shall not require the whole or part of the work to be carried out at all or to be carried out by the contractor, he shall give notice in writing of the fact to the contractor who shall thereupon suspend or stop, the work totally or partially, as the case may be. In any such case, except as provided hereunder, the contractor shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not so derive in consequence of the full amount of the work nor having been carried out, or on account of any loss that he may be put to on account of materials purchased or agreed to be purchased, or for unemployment of labour recruited by him. He shall not also have any claim for compensation by reason of any alteration having been made in the original specifications, drawings, designs and instructions may involve any curtailment of the work as originals contemplated. Where which however, materials have already been purchased or agreed to be purchased by the contractor, before receipt by him of the said notice, the contractor shall be paid for such materials at the rate determined by the Engineer-in-charge, provided they are not in excess of requirements and are of approved quality and/ or shall be compensated for the loss, if any that he may be put to in respect of materials agreed to be purchased by him, the amount of such compensation to be determined by the Engineer-in-charge, whose decision shall be final. If the contractor suffers any loss on account of his having to pay labour charges during the period during which to stoppage of work has been ordered under this clause the contractor shall on application be entitled to such compensation on account of labour charges as the Engineer-in-charge, whose decision shall be final, may consider reasonable, provided that the contractor shall not be entitled to any compensation on account of labour charges if, in the opinion of the Engineer-in-charge, the labour could have been employed by the contractor elsewhere for the whole or part of the period during which the stoppage of the work has been ordered as aforesaid.

5. The Contractor is to cover up and protect the works from the weather, and is suspend all 'wet' operations during weather which, in the Executive Engineer opinion, will be detrimental to the work.
6. Samples of each class of material and workmanship shall be submitted by the Contractor for the approval of Engineer-in-charge and after such approval these samples shall be deposited at any place the Engineer-in-charge may appoint and the Contractor shall be required to perform all the works of this contract in accordance with the samples.
7. On completion, all work must be cleaned down; rubbish removed and the works and land cleaned of rubbish; surplus materials and other accumulations, and everything left in a clean and ordinary condition.
8. The contractor shall provide, erect and maintain proper sheds and temporary buildings for the storage and protection of materials and goods and for the execution of work which may be fabricated or brought on the site.



9. The contractor shall permit the execution of the work not provided for in the tender by artists; tradesman, or others engaged by the Municipal Corporation. The contractor shall allow all reasonable facilities and the use of his scaffolding and water for the execution of such work, but is not required to provide any special scaffolding for the execution of such work except by special arrangement with Municipal Corporation.

10. WORK TO BE OPEN TO INSPECTION

All works under in course of execution or executed in pursuance of the contract shall at all-time be open to the inspection and supervision of the Engineer-in-charge and his subordinates, and the contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge or his subordinate to visit the work shall have been given to the contractor, either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for that purpose. Orders given to the contractor's duly authorised agent shall be considered to have the same force and effect as if they had been given to the contractor himself.

11. NOTICE TO BE GIVEN BEFORE WORK IS COVERED UP

The contractor shall give not less than five days' notice in writing to the Engineer-in-charge or his subordinate in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured; and correct dimensions thereof taken before the same is so covered up or placed beyond the reach of measurement any work without the consent in writing of the Engineer-in-charge or his subordinate in charge of the work, and if any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained, the same shall be uncovered at the contractor's expense, and in default thereof no payment or allowance shall be made for such work or for the materials with which the same was executed.

12. CONTRACTOR LIABLE FOR DAMAGE DONE

If the contractor or his workmen; or servants shall break, deface injure or destroy any part of a building in which they may be working, or any building, road, fence enclosure or grass land or cultivated ground continuous to the premises on which the work of any part thereof is being executed; or if any damage shall be done to the work for any cause whatever while it is in progress or if any imperfection become apparent in it within the Defect liability period mentioned above by Engineer-in-charge the contractor shall make good the same at his own expense, or in default the Engineer in charge may cause the same to be made good by other workmen and deduct the expenses (of which certificate of Engineer-in-charge shall be final) from any sum that may be due or thereafter became due to the contractor or from his security deposit or the proceed of sale thereof or of a sufficient portion thereof.

13. MATERIAL/TOOL/EQUIPMENTS/DRINKING WATER ETC. REQUIRED FOR COMPLETION OF JOB

The contractor shall supply at his own cost all materials (except such special materials, if any, as may be supplied from the SMC Stores in accordance with the contract).plant tools, appliances implements, ladders, cordage, scaffolding and any temporary works which may be required for the proper execution of the work, in the original; altered or substituted from, and whether included in these specification or, other documents forming part of the contract or referred to in these conditions or not and which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-charge as to any matter on which under these conditions he is entitle to be satisfied, or which he is entitled to require together with carriage thereof To and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works and counting, weighing and assisting in the measurement or examination at any time and from time to time of the work or materials, Failing this the same may be provided by the Engineer-in-charge at the expense of the contractor and the expense may be deducted from any money due to the contractor under the contract, or from his security deposit or the proceeds of sale thereof or of a



sufficient portion thereof. The contractor shall provide all necessary fencing and lights required to protect the public from accident; and shall also be bound to bear the expenses of every suit. Action or other legal proceedings, at law, that may be brought by any person for Injury sustained owing to negligence of the above precautions, and to pay damages and costs which may be awarded in any such suit action or proceedings, to any such person, or which may with the consent of the contractor be paid in compromising any claim by any such person. The contractor shall make his own arrangement for drinking water for the labour employed by him.

14. LIABILITY OF CONTRACTOR FOR ANY DAMAGE DONE IN OR OUTSIDE WORK AREA

Compensation for all damage done intentionally or unintentionally or by contractor's labourers whether in or beyond the limits of municipal property shall be estimated by the Engineer-in-charge or such other office as he may appoint & estimates of Engineer-in-charge subject to the decision of the Commissioner on appeal be final & the contractor shall be bound to pay the amount of the assessed compensation of demand failing which the same will be recovered from the contractor as damage from the security deposit or deducted by the Engineer-in-charge from any sum that may be due or become due from Municipal Corporation to the contractor under this contract or otherwise. The contractor shall bear the expenses of defending any action or other legal proceedings that may be brought by any person from injury sustained by him owing to negligence of precautions to prevent the spread of fire & he shall also pay any damages and cost that may be awarded by the court in consequence.

15. No work shall be done on Sunday without the sanction in writing of the Engineer-in -charge.

16. All sums payable by a contractor by way of compensation under any of these conditions shall be considered as a reasonable compensation to be applied to the use of Municipal Corporation without reference to the actual loss or damage sustained and whether any damage has or has not been sustained actual loss.

17. CHANGES IN THE CONSTITUTION OF FIRM TO BE NOTIFIED

In the case of a tender by partners any change in the constitution of a firm shall be forthwith notified by the contractor to the Engineer-in-charge for his information.

18. All works to be executed under the control shall be executed under the directions and subject to the approval in the respects of the Executive Engineer who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

19. DECISION OF COMMISSIONER TO BE FINAL

Except where otherwise specified in the contract decision of the Commissioner shall be final conclusive and binding on all parties to the contract upon all questions relating to the meaning of the specification designs, drawings and instructions here in before mentioned and as to the quality of workmanship, or materials used on the work, or as to any other question, claim, right, matter, or thing whatsoever in any way arising or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions, or otherwise concerning the works or the execution or failure to execute the same, whether arising, during the progress of the work or after the completion or abandonment thereof.

20.

All quarry fees and royalties shall be paid by the contractor All taxes shall also be paid contractor according to the Municipal rules in force at the time and no refund shall be given Certificate for refund of quarry fees and royalties in admissible under existing rules shall be given by the Municipal to the contractor after successful completion of the contract. For the levy of water charges for construction work, please see the attached Memorandum.

21. COMPENSATION UNDER WORKMAN'S COMPENSATION ACT

The contractor shall be responsible for and shall pay any compensation to his workmen payable under



the workmen's Compensation Act 1923 (VIII of 1923) or any statutory modification thereof for injuries caused to workmen.

22. CLAIM FOR QUANTITIES OF WORK ENTERED IN TENDER ESTIMATE

Quantities shown in the tender are approximate and no claim shall be entertained for quantities of work executed being either more or less than those entered in the tender of estimate.

23. CLAIM FOR COMPENSATION FOR DELAY IN STARTING THE WORK

No compensation shall be allowed for any delay caused in the starting of the work on account of any acquisition of land and in the case of clearance work, for any delay in accordance to estimate.

24. CLAIM FOR COMPENSATION FOR DELAY IN EXECUTION OF WORK

No compensation shall be allowed for any delay in execution of the work on account of water standing in borrow-pits or compartments. The rates are inclusive for hard or cracked soil, excavation in mud, soil water or water standing in borrow-pits, and no claim for an extra rate shall be entertained, unless otherwise expressly specified.

25. INSURANCE: -

Contractor shall be responsible, at his own expenses for confirming to and complying with all existing laws and regulations to protect his personnel against job connected accidents and third party claim against property damage as well as for the death and injury arising out of any action on the part of the contractor personnel while engaged in the performance of duties in connection with the contract. The contractor shall furnish the corporation with documentation certifying that he has procured and Maintenance coverage to this extent as follows:

- a. Workman's Compensation Insurance (Including) occupational disease covering the contractor's personnel engaged on the project/ job.
- b. General liability insurance (including contractual) for third party injuries, including accidental death to any person and property damage.

The documentation to be furnished to the Surat Municipal Corporation within 15 days of signing of the contract. Contractor will be responsible for insurance cover of his personnel and corporation will have no liability whatsoever on this account.

- c. CONTRACT LABOUR (Regulation & Abolition) Act – 1970: -

As per the labour act 1970, you are requested to take the labour license from the concern Government authority. If you will start the work without the labour license, you will only be held responsible for any situation arising than after. You are entirely responsible for labour regulations as per prevailing labour laws & other statutory requirement like provident fund, gratuity, child labour etc.

26. TERMINATION FOR UNSATISFACTORY PERFORMANCE: -

In any case, under any Clause/s of this tender, the contractor has rendered itself liable to pay compensation if a breach of any of the terms, conditions, specifications, etc. The SMC shall have power

To terminate the contract of which a notice in writing to the Contractor by the SMC shall be conclusive and binding in which case the security deposit of the contractor shall stand forfeited, at the absolute disposal of the SMC.

To take such part of the work as shall be unexecuted and to give it to another/other contractor to complete, in which case the expenses incurred, if any, in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (the certificate of SMC for the excess amount shall be final and conclusive) shall be borne and paid by the original contractor and may be deducted from any money due to him by the SMC under the contract or otherwise or from the



security deposit or the proceeds of sale thereof, or a sufficient part thereof.

In any case in which under any clause of or clauses of this contract, the Contractor shall have tendered himself liable to pay compensation amounting to the whole of this security deposit (Whether paid in one sum or deducted by instalments) or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause, the Commissioner on behalf of the Corporation shall have power to adopt any of the following courses, as he may deem best suited to the interest of the Municipal Corporation.

- a) To rescind the contract (of which rescission notice in writing to the Contractor under the hand of the Commissioner shall be conclusive evidence) and in that case that security deposit of the Contractor shall stand forfeited and be absolutely at the disposal of the Municipal Corporation.
- b) To employ labour paid by the Department and to supply material to carry out the works, or any part of the work debiting the Contractor with correctness of which cost and price, the certificate of the Executive Engineer shall be final and conclusive against the Contractor and crediting him with the value of the work done, in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract, and in that case the certificate of Executive Engineer as to the value of the work done shall be final and conclusive against the Contractor.
- c) To order that the work of the Contractor be in measured up and to take such part thereof as shall be executed out of his hands and to give it to another contractor to complete, in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, If the whole work had been executed by him (as to the amount of which excess expenses the certificate in writing of the Executive Engineer shall be final and conclusive) be borne and paid by the original Contractor and shall be deducted from any money due to him by the Municipal Corporations under the Contract of otherwise from security deposit or the proceeds of sale thereof, or a sufficient part thereof.

In the event of any of the above courses be adopted by the Commissioner the Contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchases or procured any materials or entered into any engagements, or made any advances on account of or with a view to the execution of the work or the performance of the contract and in case the contract shall be rescinded under provision aforesaid, the contractor shall not be entitled to recover, or be paid any sum for any work thereto actually performed by him under this contract unless and until the Executive Engineer certifies in writing the performance of such work and the amount payable to him in respect thereof, and he shall only be entitled to be paid the amount so certified.

In any case in which any of the powers conferred upon the Commissioner shall have become exercisable and the same shall not have been exercised the non-exercise thereof shall not constitute a waiver of any of the conditions hereof such powers shall notwithstanding be exercisable in any future case default by the Contractor for which by any clauses hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected.

In the event of the Commissioner taking, action under any of the clause mentioned as above, he may, be he so desires to take possession of all or any tools; plant materials and stores in or upon the works, or the site thereof or belonging to the Contractor, or procured by him and intended to be used for the execution of the work of any part thereof, paying or allowing for the same in account at the contract rates, or in the case of contract rates not being applicable at current market rates, to be certified by the Executive Engineer whose certificate thereof shall be final. In the alternative the Commissioner may, by notice in writing to the Contractor or his clerk of the works, foremen or other authorized agent require him to remove such tools, plant, materials or stores from the premises within a time to be specified in



such notice and in the event of the Contractor failing to comply with, any such requisition, the commissioner may remove them at the Contractor's expense or sell them by auction or private sale at the risk and account of the Contractor in all respects and certificate of the Executive Engineer as to the expense of any such removal and the amount of the proceeds and expense of any sale shall be final and conclusive against the contractor.

The Contract shall not be assigned or subject without the written approval of the Engineer-in-Charge, and if the Contractor shall assign or subject his contract or attempt to do so, or become insolvent or commence any proceedings to be adjudicated any insolvent or make any composition with his creditors, or attempts or attempt to do the Engineer-in-Charge may, by notice in writing rescind the contract. Also if any bribe, gratuity gift, load, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given, promised, or offered by the contractor, or any of his servants or agents to any public officer or person in the employ of the Municipal Corporation in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract the Commissioner may by notice in writing rescind the contract. In the event of contract being rescinded, the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the deposit of the Municipal Corporation and the same consequences shall ensure as if the contract had been rescinded as per above clauses here of and in addition the contractor shall not be entitled to recover or be paid or be paid for any work thereto for, actually performed under the contract.

27. LIABILITY FOR COMPENSATION EVEN IF CONTRACT IS NOT TERMINATED.

In case any of the powers conferred upon the SMC by the above Clause become exercisable and have not been exercised by the SMC, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding anything contained above, be exercisable in the event of any default by the Contractor for any clause or clauses hereof and be liable to pay compensation as per the terms of these presents. In the event of SMC putting in force either of the powers vested in it under the mentioned above, it may, if it so desires, take possession of all or any of the tools, plant, materials and stores, in or upon the works or the site thereof or belonging to or procured by the Contractor for the execution of the work or any part thereof, paying or allowing the same for the adjustment in account at the contract rates, or in case of these not being applicable, at current market rates as the case may be and certified by the SMC, whose certificate to that effect shall be final. Otherwise the SMC may, by notice in writing, ask the contractor, to remove such tools, plant, materials, or stores from the premises within a 10 days and in the event the contractor fails for such compliance, the SMC may issue suitable instructions to remove or sell them by auction or private sale on account of and at the cost and risk of the contractor and the certificate of the SMC, as to that effect, shall be final and conclusive for the contractor.

28. TIME EXTENSION

Provided nevertheless if in the opinion of SMC, the contractor is entitled to any extension of time on account of the works being altered, varied or added or delay by the reason of any inclement weather or due to the reasons not under the control of the Contractor, the SMC is empowered to order in writing for the extension of the aforesaid period for final completion, by such period(s) as it deems reasonable and the Contractor shall complete the works within such extended period(s). However, the Contractor shall not be entitled to any extension of the period unless requested in writing for such extension for event, which the Contractor considers to entitle for requesting for any extension, to Engineer-in-Charge, SMC. The SMC may in its absolute discretion, dispense with such notice and allow an extension of time. Nevertheless, in case of any extension of time, the aforesaid provisions for damages and compensation shall apply in case of non-completion of the works within the extended time. Such time extension shall not become any base for compensation for contractor under any circumstances what so ever.



29. MONTHLY ASSESSMENT OF WORKS

All work shall be measured net by standard measure and according to the rules and custom of the Department of SURAT MUNICIPAL CORPORATION without reference to any local custom. No proposals to adopt alternative methods for measurement of work will be accepted.

The Commissioner's decision as to what is the "Usual method in use in the Department will be final".

Under no circumstance shall any contractor be entitled to claim enhanced rates for any items in this Contract.

A bill may be submitted by the Contractor once in each month on or before the date fixed by the Engineer-in-Charge for all works executed in the previous months and the Engineer-in-Charge shall take or cause to be taken the requisite measurement for the purpose of having the same verified, and the claim, so far as it is admissible shall be adjusted if possible within 30 (thirty) days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in-Charge may depute a subordinate to measure up the said work in the presence of the Contractor or his duly authorized agent whose counter signature to the measurement list shall be sufficient warrant, and the Engineer-in-Charge may prepare a bill from such list which shall be binding on the Contractor in all respects. The payment shall be made as per the decision of engineer in charge. No payment shall be made for any work, estimated to cost less than Rupees one thousand.

The Contractor shall submit all bills on the printed forms to be hand on application at the office of the Engineer-in-Charge. The Charges to be made in the bills shall always be entered at the rates specified in the tender or in the case of any extra work ordered in pursuance of these conditions, and not mentioned or provided for in the tender at the rates hereinafter provided for in the tender at the rates hereinafter provided for such work.

The rates for several items of the work agreed to within shall be valid only when the item concerned is accepted as having been completed fully in accordance with the sanctioned specifications. In cases where the items of works are not accepted and not completed, the Engineer-in-Charge may make payment on account of such items at such reduced rates as he may consider reasonable in the preparation of final or on account bills.

Payment against bills for the work done, subject to the required deductions, shall be made to the contractor based on detailed measurements and certifications of bills by the Engineer-in-Charge and on the recommendations of SMC as per the terms of payment mentioned elsewhere in tender document.

All such intermediate payments shall be regarded as payments by way or advance against the final payments only and not as payments for work actually done and completed and shall not preclude the Engineer-in-Charge from requiring bad, unsound imperfect or unskilful work to be removed and taken away and reconstructed, or re-erected, nor shall any such payments be considered as an admission of the due performance of the contract or any part thereof in such respect of the accruing of and claim nor shall it conclude, determine or affect in any the powers of the Engineer-in-Charge as to the final settlement and adjustment of the accounts or otherwise, or in any other way vary or affect the contract. The final bill shall be submitted by the contractor within one month of the date fixed from the completion of the work, otherwise the Engineer-in-Charge's certificate to the measurement and of the total amount payable for the work shall be final and binding to contractor.

The final bill for the work will be assessed on the modified Tender, wherever applicable, to give effect to the omissions, additions or variations from the prescribed drawings, specifications, and instruments and the detailed assessment of such omissions or variations.

Provided always that no final or other certificate is to cover or relieve the Contractor from its liability under the provisions of the following clause

Whether or not the same may be notified by SMC at the time or subsequent to the granting of the certificate.

All material supplied and work done by the Contractor shall remain the absolute property of the



Municipal Corporation, and shall on no account be removed from the site of the work, and shall at all times be opened to inspection by the Engineer-in-Charge.

When the estimate on which a tender is made includes lump-sums in respect of parts of the work the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under contract or such items or if the part of the work in question is not the opinion of the Engineer-in-Charge capable of measurement the Engineer-in-Charge may at his discretion pay the lump sum amount entered in the estimate, and the certificate in writing of the Engineer-in-Charge shall be final and conclusive under the provisions of the clause.

Under any circumstance any interest on any account what so ever due to incident of the contract shall not be payable to contractor.

All such intermediate payments shall be regarded as payments by way or advance against the final payments only and not as payments for work actually done and completed and shall not preclude the Engineer-in-charge from requiring bad, unsound imperfect or unskilful work to be removed and taken away and reconstructed, or re-erected, nor shall any such payments be considered as an admission of the due performance of the contractor any part thereof in such respect of the accruing of and claim; nor shall it conclude, determine or affect in any way the Powers of the Engineer-in-charge as to the final settlement and adjustment of the accounts or otherwise, or in any other way vary or affect the contract. The final bill shall be submitted by the Contractor within one month of the date fixed for the completion of the work, otherwise the Engineer-in-charge's certificate to the measurement and of the total amount payable for the work shall be final and binding on all parties.

If at any time before the security deposit is refunded to the Contractor, it shall appear to the Engineer-in-charge of the work that any work has been executed with unsound imperfect, or unskilful workmanship or with materials of inferior quality; or that any materials or articles provided by him for the execution of the work are unsound, or of a quality inferior to that contracted for, or otherwise not in accordance with the contract, it shall be lawful for the Engineer-in-charge to intimate this fact in writing to the Contractor and then notwithstanding the fact that the work, materials or articles complained of may have been in advertently passed, certified and paid for, the Contractor shall be bound forth with to rectify, or remove and reconstruct the works so specified in whole or in part as the case may require, or if so required, shall remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost; and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in the written intimation aforesaid, the Contractor shall be liable to pay compensation at the rate of one percent on the amount of the estimate for every day not exceeding ten days, during which the failure so continues and in the event of any such failure as aforesaid the Engineer-in-charge may rectify or remove and re-execute the work or remove and replace the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor, should the Engineer-in-charge consider that any such inferior work or Materials as described above may be accepted or made use of it; shall be within his discretion to accept the same at such reduced rates along with the appropriate penalty as the Commissioner may deem fit. The period to be counted from that date of final completion and handing over of the work to the Municipal Corporation during which the Contractor is so liable for any defects in the work shall be the Defects Liability Period shown in the attached Memorandum.

30. TERMS OF PAYMENT

Recoveries shall be made from the above payments as per provisions made in various conditions, clauses, terms etc., in the tender documents and other dues from the Contractor.

Receipt for payments made on account of any work when executed by a firm, should also be signed by all the partners, except where the contractors are described in their tender as a firm in which case the receipts shall be signed in the name of the firm by one of the partners, or by some other person having authority to give effectual receipt for the firm.

31. COMPLETION CERTIFICATE

The Work shall be deemed to have been completed in all respects on the day SMC certifies that the



Works have been completed in accordance with the Contract and issues a Certificate to that effect.

The stage of work completion shall mean, the work completed by contractor with all respect and according to terms, conditions and specifications. This stage will be considered after completion of trial run.

32. FINAL PAYMENT

The final bill shall invariably be preceded by a thorough assessment of the entire work performed by the Contractor. The Contractor shall submit the final bill for the works within one (1) month of such final assessment. The bill shall be based only on the works as assessed and at the accepted tender rates, including rates for any additional or extra work which might have been sanctioned by the SMC. All the deductions due under the Contract shall be adjusted accordingly in the final payment.

INSPECTION AND TESTING

- a) The Contractor shall provide at all times during the progress of the work and also during the defect liability period proper means of access and required attendants to move and arrange things as directed for the purpose of inspection or assessment of the work by the SMC or its authorized representative.
- b) All Works embracing more than one activity shall be subject to examination and approval at each stage and the contractor shall give due notice in writing to the Engineer-in-Charge when each stage is ready. In default of such notice, the Engineer-in-Charge shall be entitled to appraise the quality and extent thereof.
- c) No work shall be put out of view by the Contractor without the approval of the Engineer-in-Charge and the Contractor shall afford full opportunity for the examination and assessment of any work which is so considered. Similarly, no work involving pre- assessment shall be taken up without a specific authorization by the Engineer-in-Charge. The contractor shall give a notice of not less than 2 days but not more than 4 days, in any case, in writing to the Engineer-in-Charge whenever any work or equipment is intended to be covered up in the earth or in walls or otherwise to be placed beyond the reach of assessment so that the work may be inspected and verified by the Engineer-in-Charge or that the correct dimensions may be taken before being so covered up. The Engineer-in-Charge shall, without unreasonable delay, unless he considers it to be unnecessary and advises the Contractor accordingly, attend for the purpose of examining and assessing such work or materials intended to be covered up. In the event of the failure on the part of the contractor to give such notice, such work/equipment shall be uncovered, if required, by the Engineer-in-Charge at the expense and cost of the Contractor.
- d) The Contractor shall uncover any part of the Works and/or make openings in or through the same as the Engineer-in-Charge may from time to time direct for his verification and shall reinstate and make good such part to the satisfaction of the Engineer-in-Charge. However If any such part has been covered up or put out of the view after being approved by the Engineer-in-Charge and is subsequently found on uncovering, to be executed in accordance with the Contract, the cost and expense of uncovering and/or making openings in or through reinstating, making good the same shall be borne by the SMC. In any other case all such costs and expenses shall be borne by the Contractor.

33. NO ESCALATION PAYABLE FOR WAGES AND MATERIALS

No payments to the Contractor on account of escalation of rates of equipment, materials, wages, fluctuation in foreign exchange rate, etc., are admissible. The Contractor is supposed to foresee all statutory /other escalations which may be taken into account while quoting the rates in the tender. However, the Contractor as notified by the Government shall pay the minimum wages payable to the labour as per Minimum Wages Act from time to time during the execution of the project. Any payment



made over and above the specified minimum wages shall be on Contractor's account and the SMC shall not be liable to account for the same. In case of imported equipment any possible increase in custom duties, CVD, etc., shall also be foreseen and absorbed by the Contractor.

34. WORK TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS AND ORDERS OF SMC

The Contractor shall execute the entire work in the most productive, professional and prudent manner both as regards usage of materials and time in every respect in strict accordance with the approved design, specifications, drawings, etc.

The Contractor shall comply with the provisions of the contract and with due care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for assessment and supervision of all works, structural plans and other things of temporary or permanent nature, required for such execution and maintenance in so far as the necessity for such provision is specified or reasonably inferred from the contract. The contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of erection / installation.

All works under the contract shall be executed under the directions and subject to the approval in all respects of the SMC which shall for time to time direct at what point(s) and in what manner the works to commence, and carried on.

The contractor shall execute the whole and every part of the work in the most substantial and workman like manner, and both as regards materials and in every other respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to designs, drawings and instructions in writing relating to the work signed by the Engineer-in-charge and lodged in his office and to which the contractor shall be entitled to have access for the purpose of inspection at such office, or on the site of the work during office hours, and the contractor shall, if he so requires, be entitled at his own expense to make or cause to be made copies of the specifications and of all such designs, drawings and instruction on aforesaid.

35. ACTION IN CASE WORK NOT DONE AS PER SPECIFICATIONS

All works in the course of execution or executed in pursuance of the contract shall, at all times, be open and accessible to the inspection and supervision of the SMC or its authorized representative and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such representatives has been given to the contractor, either himself be present to receive orders and instructions or has a responsible agent duly accredited in writing, present for that purpose. Orders given to such agent shall be considered to have the same force as if they had been given to the Contractor himself.

If at any time, it appears to the SMC or its authorized representative that any work has been executed with unsound, imperfect, or unskilful manner, or with inferior or grade of materials or articles or otherwise not in accordance with the contract for the execution of the work, the contractor shall, on demand in writing, which shall be made within the Project Completion Period from the SMC specifying such work, materials or articles, notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case maybe, and remove the materials or articles so specified and provide materials or articles as per the terms and in accordance with the spirit of the contract, at its own expense and cost. In the event of the Contractor failing to do so within a period specified by the SMC in its demand as aforesaid, the Contractor shall be liable to pay compensation at the same rate as for non-completion of the work in time for the default on its past.

In such case the SMC may at its sole discretion, accept the item of work at reduced rates as applicable under the contract during the preparation of on account bills or final bill. Further, if the item is so acceptable, without detriment to the safety and utility of the item and the structure the SMC may



reject the work outright without any payment and/or get it other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. The decision of SMC to be conveyed in writing in respect of the same will be final and binding on the Contractor.

36. INTERPRETATION OF CONTRACT DOCUMENTS

DISCREPANCIES BETWEEN INSTRUCTIONS

Should any discrepancy occur between the various instructions furnished to the contractor his agents or staff, or any doubt arises as to the meaning of any such instruction or, should there be an misunderstanding between the contractor's staff and the Engineer-in-charge's staff, the Contractor shall immediately report the matter in writing to the Engineer-in-charge whose decision thereon shall be final and conclusive and no claim for losses alleged to have been caused by such discrepancies between instructions, doubts or misunderstanding shall in any event be admissible.

37. STATUTORY AND OTHER OBLIGATIONS REGARDING WORKMEN

The Contractor shall comply with all Central, State and Local Regulations, enactment and laws pertaining to workmen labour compensation or otherwise and the Engineer-in-Charge shall have the right to inquire into and decide all complaints in such matters.

The contractor shall work only during the daylight hours as approved by the SMC / Engineer-in-Charge unless he obtains the prior written approval to do otherwise. Even if such approval is given, no liability in respect of any excess cost arising therefrom shall be borne by the Contractor.

The Contractor shall be solely liable for all the pecuniary and other consequences arising on account of violation or default on its parts of any of the provisions of the laws, Acts, Rules and Regulations or any other statutory obligations which may be in force, from time to time, regarding the conditions of employment of workmen. In addition, any such failure or violation or default on part of the Contractor will constitute a breach of the conditions of the contract and liable for suitable actions in terms of the relevant clauses thereof.

The contractor shall be liable to pay the wages directly to the workmen/workers employed by him on the works without the intervention of any intermediaries and shall ensure that no amount by way of commission or otherwise is deducted or recovered by such intermediaries from the wages of workmen/workers.

38. FORCE CLOSURE OF CONTRACT OR ABANDONMENT DUE TO REDUCTION IN THE SCOPE OF WORK

If, at any time after the commencement of work, the SMC, for any reason whatsoever, does not require the whole work as specified in the tender to be carried out, the SMC or its authorized representative shall give a notice in writing, to that effect to the Contractor and the Contractor shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the works in full but could not derive in consequence of such decision of the SMC. He shall have no claim for the compensation by reason of any alteration having been made in the original specifications, drawings and instructions which may involve any curtailment, variation or increase of the work as originally contemplated.

39. TEMPORARY SUSPENSION OF WORKS

If the work should be suspended by the reason of rain, strike, lock outs, or other causes, the Contractor shall take all necessary precautions for the protection of the Works and shall at his own cost and expense make good any damage arising from any of these causes. No claim in this regard shall be entertained.

40. AMBIGUITIES OR DISCREPANCIES IN DRAWINGS AND SPECIFICATIONS

The Contractor shall from time to time check all Drawings and Specifications and shall promptly notify



the Engineer-in-Charge of any omission or discrepancies therein. In case of ambiguities or discrepancies in Drawings, Specifications or Schedule of Quantities and Rates/Prices or any of them, the same shall be referred to the SMC in writing, and the decision of SMC shall be final and binding on the Contractor.

41. GUARANTEE OF WORKS AND LIABILITY FOR DAMAGES, DEFECTS ETC.

The defect liability period in respect of the works shall be fulfilled and adhered to after completion of the work. The Contractor shall guarantee that the Material/equipment or parts thereof provided under the contract are new and free from defects in design, material and workmanship. The contractor shall also give guarantee for the satisfactory performance of the material/equipment or parts thereof provided under the contract and for the workmanship of the works executed as per the contract. This guarantee shall be valid for the duration of the defect liability period. Any defects, that may appear in the work within the defect liability period, which in the opinion of SMC or the Engineer-in-Charge is due to defective or improper material/equipment or bad workmanship or the work not being in accordance with the drawings, specifications or instructions under the contract shall be made good and/or repairs by the Contractor at his own cost and expense.

If it is found that the performance of the Material/equipment or parts thereof are not satisfactory and that any defect in design, material and/or workmanship is found within the defect liability period, the Engineer-in-Charge shall intimate to the Contractor to that defect in writing. The Contractor shall immediately but not later than 7 days of the receipt of such intimation investigate the causes of such defects. The Contractor shall arrange to provide within a reasonable period all the necessary Engineering designs, materials for the rectification/replacement of the defective Material/equipment or parts thereof at site at his own cost and expense. If the Contractor fails to take proper corrective action to repair the defects or otherwise to replace the Material/equipment or parts thereof to the satisfaction of the Engineer-in-Charge within a reasonable period, the SMC may at its option after giving 15 days' notice in writing, take suitable action for such rectification or replacement, as it deems necessary, at the risk and cost of the Contractor.

In the event of an emergency in the opinion of the Engineer-in-Charge, where the delay would cause serious loss or damage or in the cases of minor defects found in the designs, materials and/or workmanship, within the defect liability period, the SMC shall however, have a sole right to take up immediately, notwithstanding Clause 2.20.2. Above, suitable corrective action for repair or rectification or replacement as deemed necessary, through a third party chosen by the SMC without any advance intimation to the Contractor. In such cases, the Contractor shall be intimated and shall assist and cooperate in making the repairs/rectification.

In case the defects are of such nature that the Material/equipment or parts thereof require to be taken to the workshop of the Contractor for rectification, the same shall be taken by the Contractor at his cost and expense. In case the Contractor so desires the same shall be so dispatched at the risk and cost of the Contractor. However in both cases, the Contractor shall furnish necessary Hypothecation Deed to the Engineer-in-Charge in respect of such Material/equipment or part thereof, and shall provide additional bank guarantee (Nationalized bank only) of amount equal to the cost of Material/equipment, as required by the Engineer-in-Charge before the Material/equipment, or parts thereof are removed from the site. After the necessary rectification or replacement, the Contractor shall deliver and duly install the Material/equipment or parts thereof at site at his own expense to the satisfaction of the Engineer-in-Charge. All risks in transit to and from the site shall be borne by the Contractor.

If the repairs, replacement or modifications as referred above are of such nature as may affect the efficiency of the Material/equipment or parts thereof, the SMC shall have the right to give to the Contractor a notice in writing within one month of such repair, replacement, renewal to carry out the



tests, as may be required, for the acceptance of the equipment by the Engineer-in Charge.

When the defective Material/equipment or parts thereof are not repairable at site and sent to the workshop of the Contractor for necessary repairs or replacement but are essential for the operation of the facility, the Contractor shall take all the necessary steps to the satisfaction of the Engineer-in-Charge to minimize interruptions in the operation of the facility till such time the repaired equipment or parts thereof are returned back satisfactorily.

Material/Equipment or parts thereof so repaired or replaced shall have further defect liability period of 36 months from the date of acceptance, of such repair or replacement, by the Engineer-in-Charge and the contractor shall immediately arrange to extend the validity of the respective Bank Guarantee to adequately cover the extended period. Failing to supply the repaired Material/equipment with the mutually agreed time period, the bank guarantee shall be forfeited to SMC and the Material/equipment will be replaced by SMC at risk and cost of contractor.

42. EQUIPMENT NEEDED FOR THE WORKS

The Contractor shall, at his own cost and expense, provide all the Material/equipment, machineries, tools, etc. required for the works.

All Material/equipment to be provided by the Contractor shall be in conformity with the specifications laid down or referred to in the Contract and the Contractor shall on the request of the Engineer-in-Charge, furnish proof, to the satisfaction of the Engineer-in-Charge, that the Material/equipment so comply.

The Engineer-in-Charge shall be entitled to have tests carried out as specified or referred to in the contract for any Material/equipment provided by the Contractor at the cost and expense of the Contractor and the Contractor shall provide at its cost and expense all facilities which the Engineer-in-Charge may require for such purpose. In case of the tests not being specified in the Contract, but are considered necessary by the Engineer-in-Charge, the Contractor shall provide all facilities and assistance required for the purpose and the charges for such tests shall be borne by the Contractor.

All Material/equipment and parts thereof shall be of such design as properly and satisfactorily function under all operating conditions. All the components or Material/equipments shall have proper factor of safety, maximum efficiency minimum wear and tear and ability to withstand in the respective environmental conditions encountered at the specific location, whether specifically mentioned in the specifications or not. Equipment shall be new, free from defects and of best quality. All the equipment shall conform to the latest revised relevant Indian / International Standards. Equipment which do not conform to either Indian Standards or the International Standards accepted in India, shall require approval of the SMC or Engineer-in-Charge by the Contractor furnishing a sample with the test certificate and performance certificates from a duly recognized test house in India.

43. SAFETY REGULATIONS

During the execution of the work, unless otherwise specified, the contractor shall at its own cost and expense provide the materials for all shoring, timbering and shuttering work necessary for the stability, safety and construction of all structures, excavations and works and shall ensure that no damage, injury or loss is caused or is likely to be caused to any person or property.

The Contractor shall be responsible to take all precautions to ensure the safety of the person or property whether on public or works site during the period of contract and shall post such look out personnel as may, in the opinion of the Engineer-in-Charge, be required.

The Contractor shall assure the safety of the work and personnel and contractor shall be entirely responsible for any damage or injuries to any property or person resulting from any accident due to any reasons.

The Contractor must take sufficient care while moving, handling and installing material/equipment, so



as not to cause any injury or damage to the persons or property of the SMC or the public or other working in or around the works. In case of causing of any injury or damage, to any person or property as aforesaid, the costs and expense of such occurrences, including eventual loss of working hours as estimated by the SMC, shall be borne by the Contractor. The Contractor shall also replace or repair all the damages caused to buildings or Material/equipments left at the time of the completion of the work to bring the building or Material/equipment back to the original condition.

The Contractor shall, at its cost and expense, provide all the necessary facilities such as ladders, tools & tackles, railing, platform, inspection lamps, safety ropes, etc., for providing the safe working conditions to its or sub-contractor's workmen/workers and also for the inspection of the works by the authorized officials under the contract.

In any case of dismantling or demolition or otherwise the Contractor shall take necessary care not to damage the existing structure, equipment or materials while executing the works, and any damage, if caused on account of the same, shall be rectified or repaired by the contractor at its own cost and expense in restoring the structure or materials to its original condition.

44. REMOVAL OF SITE STAFF ON THE DIRECTION OF THE ENGINEER-IN-CHARGE

The Engineer-in-Charge may require the Contractor to dismiss or remove from the site of the work any person or persons in the contractors' employment who may be found to be incompetent or misconduct(s) and the Contractor shall forthwith comply with such requirements.

The Contractor shall provide and employ on the site only such efficient and competent engineers, supervisors and skilled, semi-skilled and unskilled workers as are necessary for the proper supervision and timely execution of the Works. Orders / instructions given to the Contractor's Engineers/ Supervisors shall be considered to have the same force as if it had been given to the Contractor himself. The contractor is bound to remove any of its employees from the works/ site if the said employee is not acceptable to the Engineer-in-Charge.

45. CHANGES IN FIRM'S CONSTITUTION

Where the Contractor is a partnership firm/ private/public organization, a prior approval in writing from the SMC shall be obtained for any change in the constitution of the firm. Where the Contractor is an individual or a Hindu undivided family, such approval as aforesaid, shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would acquire the right to carry out the business of the Contractor. If such prior approval is not obtained, the contract shall be deemed to have been assigned in contravention of clause mentioned elsewhere in the tender, for the work hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause.

46. DECISIONS BY THE SMC AND ENGINEER-IN-CHARGE

It shall be accepted, like as an inseparable part of the Contract, that in matters quality of materials, workmanship, removal of improper work, interpretation of Contract, drawings and specifications, mode or procedure of carrying out the work, the decision of the SMC shall be final and binding on the Contractor and for any technical question which may arise touching the Contract, the SMC or Engineer-in-Charge decision shall be final and conclusive.

47. PATENTS, RIGHTS AND ROYALTIES

The Contractor shall fully indemnify the SMC and their all agents, servants and employees of the SMC against any action, claim or proceedings relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay the royalties or other charges which may be payable in respect of any article or part thereof included in the Contract. In the event of any claim being made or action being brought against the SMC or any agent, servant or employee in respect of any of the matters aforesaid, the Contractor shall be notified thereof for taking necessary action at its cost and expense.



48. RIGHT OF SURAT MUNICIPAL CORPORATION TO CAUSE AUDIT OF THE ACCOUNT OF CONTRACTOR AND TECHNICAL EXAMINATION OF THE WORK

The SMC shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc., to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the Contractor under the Contract or found not to have been executed, the Contractor shall be liable to refund the amount of over-payment and it shall be lawful for the SMC to recover the same from the Contractor in the manner prescribed or in any other manner legally permissible; and if it is found that the Contractor was paid less than what was due to it under the Contract in respect of any work duly executed by the Contractor, the amount of such under payment shall be duly paid by the SMC to the Contractor, without any interest thereon whatsoever.

49. SUPERINTENDENCE OF WORK BY THE CONTRACTOR, SUPERVISION, TECHNICAL STAFF, EMPLOYEES ETC.

The Contractor shall provide all the necessary superintendence during the execution of the work and subsequently as long as may be necessary for proper fulfilling of the obligations of the Contractor under the contract.

The Contractor shall, immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the SMC, the name, qualification, experience, age, address and other particulars along with certificates, of the principal technical representative/ Project Engineer to be in charge of the work. Such qualifications and experience shall be in the relevant field. The SMC shall, within 15 days of the receipt of such communication, intimate in writing its approval or otherwise of such representative of the Contractor. Any such approval may, at any time, be withdrawn and in case of such withdrawal under this clause, the decision of the SMC shall be final and binding on the Contractor. Such a principal technical representative/Project Engineer shall be appointed by the Contractor soon after the receipt of the approval from the SMC and shall be available at site within fifteen days of the start of the work.

In case where the Contractor is a sole proprietorship or partnership firm and the sole proprietor or partner himself / herself has such qualification, it shall not be necessary for the said Contractor to appoint such a principal technical representative but in such case the Contractor shall designate and appoint a responsible agent to represent him / her who will be present at the works whenever the Contractor is not in a position to be so present. All the provisions applicable to the principal technical representative under the Contract shall be applicable, in such a case, to the Contractor or its designated representative, in charge of the work in writing or in person or otherwise, present himself / herself to the Engineer-in-Charge and/or at the site of work, as required, to take instructions. All instructions given to the principal technical representative or the responsible agent shall be deemed to have the same force as if they have been given to the Contractor. The principal technical representative and/or the Contractor or its responsible authorized agent shall be actually available at site at least three working days in every week, as determined by the Engineer-in-Charge in consultation with the Contractor, by a written notice, and shall also note down instructions conveyed by the Engineer-in-Charge in the site order book and shall affix its/his/her signatures in token of noting down the instructions and acceptance of the same. There shall be no objection if these details are disclosed to the Engineer-in-Charge and he shall be satisfied that the provisions and the purpose of this clause are fulfilled satisfactorily.

If the Engineer-in-Charge, whose decision in this respect is final and binding on the Contractor, is convinced that no such technical representative or agent is effectively appointed or is effectively attending or fulfilling the provision of this clause, a recovery shall be effected from the Contractor as per the relevant Clause(s) and the decision of the Engineer-in-Charge, as recorded in the site order book and assessment recorded in assessment Book, shall be final and binding on the Contractor. Further if the Contractor fails to appoint a suitable technical representative or responsible agent and if such appointed person is not effectively present or does not discharge his/her responsibilities



satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date a suitable person is so appointed and the Contractor shall be held solely responsible for the delay so caused in the matter.

The Contractor shall provide and employ skilled, semiskilled and unskilled labour as is necessary for the proper and timely execution of the work.

The Engineer-in-Charge shall be at a liberty to object and require the Contractor to remove from the works any person who in his opinion misconducts himself or is incompetent or negligent in the performance of his/her duties or whose employment is otherwise considered by the Engineer-in-Charge to be undesirable. Such person shall not be employed again at works without the written permission of the Engineer-in-Charge and the Contractor shall suitably replace the person so removed, as soon as possible.

All works under in cause of execution or executed in pursuance of the contract shall at all-time be open to the inspection and supervision of the Engineer-in-Charge and his subordinates, and the contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-Charge or his subordinate to visit the work shall have been given to the contractor, either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for that purpose, orders given to the contractor's duly authorized agent shall be considered to have the same force and effect as if they had been given to the contractor himself.

The contractor shall give not less than five days' notice in writing to the Engineer-in-Charge or his subordinate in charge of the work before covering up or otherwise placing beyond the reach or measurement any work in order that the same may be measured; and correct dimensions thereof taken before the same is so covered up or placed beyond the reach of measurement any work without the consent in writing of the Engineer-in-Charge or his subordinate in charge of the work, and if any work shall be covered up or placed beyond the reach of measurement such notice having been given or consent obtained, the same shall be uncovered at the contractor's expense, and in default thereof no payment or allowance shall be made for such work or for the materials with which the same was executed.

50. TAXES, AND DUTIES TO BE PAID BY THE CONTRACTOR, OBTAINING OF PERMIT ETC. RESPONSIBILITY OF THE CONTRACTOR

VAT or any other taxes, customs, works contract tax, Construction cess, stamp or any other statutory duties or dues of Central or state government(s) or Authorities on the equipments and/or components in respect of the contract, including applicable works contract tax, income tax and construction cess shall be payable by the contractor and shall be deemed to have been included in the amount quoted by the contractor for executing the works under the contract. The SMC shall not entertain and shall not be liable for any claim whatsoever in this respect and shall not issue any kind of certificate to the Contractor for obtaining exemption / concession from the respective concerned authorities.

If pursuant to or under any law, notification or order, any fee, cess or the like becomes payable by the Contractor to the Central or State Government(s) or any local authority in respect of any material used by the contractor in the works, the SMC shall have a right to recover the amount paid in the circumstances by SMC, towards the said levies, from the dues of the Contractor.

51. EXCEPTED RISKS (FORCE MAJEURE)

If, at any time, the execution of the Contract is affected by War, (declared or not), hostilities, invasion, acts of foreign enemies, civil war, rebellion, revolution insurrection, riots and civil commotion (other than solely restricted to the employees/workers of Contractor), Acts of State, Acts of God such as earthquake, massive floods and other notified epidemic which an experienced Contractor could not have reasonably foreseen or reasonably made provision for these or insured against, then the Contractor shall, within seven days of such occurrence, apply to the SMC together with the adequate evidence for obtaining such extension of time as may be warranted by the circumstances. After a



careful examination of the circumstances, the SMC may grant such extension of time as deemed necessary, without insisting on changing liquidated damages from the Contractor for such period.

Any extension of time granted by the SMC shall neither entitle the Contractor to claim for any increase in prices nor shall it release him from any of the obligations under the Contract. If the execution of the Contract as a whole is delayed by the reason of force majeure conditions persisting for a continuous period exceeding six months, the SMC and the Contractor shall discuss the matter and decide either to terminate the Contract without obligations on each side or to continue its execution on such terms as may be agreed upon.

52. APPRENTICES ACT PROVISIONS TO BE COMPLIED WITH

The Contractor shall remain liable for the payments of all wages or other money to its employees or workers under the Minimum Wages Acts, Payment of Wages Act, Employees Liability Act, Workmen's Compensation Act, ESI Act or any other laws, enactments and rules in force or made applicable from time to time by the Central or State Government(s). The Contractor shall also comply with the provisions of the Apprentice Act, Contract Labour (Regulations and Abolition) Act and the Rules and Orders issued there under from time to time. In case the SMC pays or becomes liable to pay any wages or dues to the labour or to any Government Agency under any of the provisions of the said acts or rules or other regulations, due to the omission or default on the part of the Contractor, the SMC may, at its sole option, make such payments and recover the same from the bills of the Contractor.

53. INSPECTION OF SITE

The Contractor shall be deemed to have quoted after fully understand the nature of work to be done under this contract and the Contractor shall also be deemed to have inspected the Site of the Works and surroundings, the means of access thereto and to have generally obtained its own information on all matters and things which can in any way influence its tender. The Contractor shall also make itself familiar with the working conditions, accessibility to site of works, availability of Labour and equipment and such other relevant conditions which may affect the execution and completion of the work. No claim for any extra work or otherwise will be allowed in consequence of any misunderstanding, error or incorrect information on the above mentioned points or of any other inaccuracies in the reference thereto which may appear on the drawings or in the specifications or other records nor shall the contract be nullified in consequence of any such misunderstandings, incorrect information or inaccuracies.

54. CONTRACTOR'S SITE OFFICE & AMENITIES

The responsibility for providing any accommodation, feeding and sanitary necessities for the workers employed by the Contractor shall be exclusively of the Contractor; SMC shall not provide any site for that.

55. IDENTIFICATION BADGES/PASSES

The Contractor shall provide to each of its employees, including labour, with the identification badge at its cost and expense. The employees / labourers shall display the badges on their person so that the badges are clearly visible for checking at all times by the security as they enter and work in the premises of the SMC. The badges shall be printed, serially numbered with an identification number and duly signed by the Contractor.

The Contractor shall immediately notify the SMC if any of the badges is lost and a new one issued in its place, or when the badges are taken away by the discharged labour. No employee / worker of the Contractor without such badge will be permitted to enter and work in the premises of SMC, except in such cases where special permission in writing, of the Engineer-in-Charge is obtained.



56. WATCHING AND LIGHTING

The Contractor shall at its own cost and expense provide watchmen at all the places of the work wherever deemed necessary or required by the Engineer-in-Charge. The Contractor shall also keep all open trenches, excavations or other dangerous places properly and sufficiently lighted between sunset and sunrise and shall provide and fix proper fencing, hoardings or temporary bridges to protect and assist the normal traffic. The Contractor shall also, at its own cost and expense, erect temporary fences on the sites where required by the Engineer-in-Charge.

57. COMPLIANCE WITH LOCAL LAWS, ETC.

The Contractor shall comply with all Acts, Rules, Bye-laws, Regulations and all other statutory requirements of local or other Authorities having jurisdiction over the Site and shall be responsible for the payment of all fees and other charges and giving and receiving of all necessary notices, and keep the Engineer-in-Charge informed of the said compliance with such Acts, Rules, Bye-laws, Regulations, statutory requirements, payments made, notices issued and received.

The Contractor shall be responsible for and shall pay any compensation to his workmen payable under the workmen's compensation Act 1923 (VIII of 1923) of any statutory modification thereof for injuries caused to workmen.

The contractor shall also arrange to obtain the license from the competent Authority under the contractor labour (regulation and abolition) Act 1970

No contractor shall employ any person who is under the age of 18 years. If any contractor found employing person or persons under the age of 18 years, during course of the construction at any stage, legal actions shall be taken against him as stipulated in child labour (Prohibition & Regulation) Act 1986 and also, a penalty of Rs. 20,000/- (Rupees Twenty thousand) shall be imposed which shall be deposited with District Collector in child labour Rehabilitation cum welfare fund.

No contractor shall employ donkeys or other animals with breeching of string or thin rope. The breeching must be at least three inches wide and should be of tape (Nawar).

No animals suffering from sores, lameness or emaciation or which is immature shall be employed on the work.

The Engineer-in-Charge or his agent is authorized to remove from work any person or animal found working which does not satisfy these conditions and no responsibility shall be accepted by the Municipal Corporation for any delay caused in the completion of the work by such removal.

The contractor shall pay fair and reasonable wages to the workmen employed by him in the contract undertaken by him in the event of any dispute arising between the contractor and his workmen on the ground that the wages paid are not fair reasonable, the dispute shall be referred without delay to the Executive Engineer who shall decide the same.

The decision of the Executive Engineer shall be conclusive and binding on the contractor but such decisions shall not in any way affect the condition in the contract regarding the payment to be made by the Municipal Corporation at the sanctioned tender rates.

58. MATERIALS OBTAINED FROM EXCAVATION/DISMANTLING

All the useful materials, obtained from dismantling or demolition, and all fossils, coins, articles of value, etc. which may be found, discovered during the execution of the works shall be handed over to the SMC as directed at no extra cost to the SMC.

59. INDEMNITY AND INSURANCE

The Contractor shall indemnify and keep indemnified both the SMC and against all losses and claims for the injuries or damage to any person, or property whatsoever which may incur out of or in consequence of the construction and maintenance of the Works and against all claims, demands,



proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto.

The Contractor shall obtain, at its cost and expense, an Insurance Policy in the joint names of the SMC and the Contractor, covering the following risks and lodge the Policy with the SMC

Works including temporary / permanent structures, equipment, tools etc. at site against the damage by fire, burglary, strikes, riots and civil commotion and natural calamities like floods, earthquake, explosion, etc.

The workmen / workers employed by the Contractor against the Workmen Compensation Act and other statutory Laws where the compensation is payable by the Contractor;

Damages to the property of third parties including the neighboring buildings, equipment etc.

Damages to third parties including the staff, visitors, neighbors and other passer-by of the SMC against any claim that may arise due to accidents, on account of the incidental risks, which may occur during the execution of Works.

All claims / amounts against the policy shall be payable to the SMC and not to the Contractor. The Contractor shall keep the policy renewed from time to time until the Certificate for Completion of works is issued by the SMC. If at any time the policy so obtained and kept with the SMC expires, it shall be lawful for the SMC to stop further payments until the duly renewed policy is lodged with the SMC.

In case of, damage to the property such as equipments, machineries, instruments, buildings, and other assets etc., the claims once remitted to the SMC by any insurance company, the same will be disbursed in favour of contractor after rectifying such damage to the satisfaction of engineer in charge. In case of damage to labours, or any other persons, contractor shall compensate to the concern labours or any other persons till then SMC will retain the amount equal to compensation to be made, from the RA bills. After producing the authentic proof of compensation and clearance from the labour office where ever applicable, the retained amount of contractor shall compensate to the concern labours or any other persons till then SMC will retain the amount equal to compensation to be made from the RA bills. After producing the authentic proof of compensation and clearance from the labour office where ever applicable, the retained amount shall be released to the contractor.

The contractor shall take 'All contract risk insurance policy' for the tender cost of work viz. Rs. lacs of "Work's man compensation policy" for all workers and labours of contractor and clients working at site and "Third party insurance policy" to fully cover all third-party type risk. The insurance policy so taken by the contractor for such purpose shall be in the joint name of the contractor and the client and the policy shall be deposited with the SMC.

TRANSIT INSURANCE

The Contractor shall arrange at his cost for transit insurance for the dispatch of Material/equipment or parts thereof.

60. EXECUTION OF THE WORKS

The civil work and the whole erection and installation work of mechanical equipments shall be done in supervision of Civil/Mechanical Supervisor/Engineer-in-charge. No work including erection/ installation shall be between 8.00 to 17.00 hours with 1.00 hour of recess in between or on Sunday or Government holidays, except with the special sanction of the Engineer in writing previously obtained, and the withholding of such sanction shall be no ground of complaint on the part of contractors of cause for compensation to them. The period within which the work has to be carried on and completed has been fixed in terms of this cause with the provision that the total number of hours of work permissible shall not exceed 48 hour in a week and in no case more than 8 hours on any working day the actual times within which the said hour shall be worked being subject to mutual arrangement



with the contractors at the commencement of the work or from time to time as may be required and provided that for the one hour about mid-day exclusively of the permissible hours aforesaid for work, all works shall be stopped for raft and modes though sanction may be accorded to the contractor to work on days and at times otherwise, normally non-permissible under this contract, the contractors shall be required to bear the cost of such supervision as in the opening of the engineer may be necessary at these times. It should be distinctly understood that the granting of permission to work extra hours or to work on Sundays and Holidays will be entirely at the discretion of the Engineer and cannot be claimed by the contractors as a matter of right and the refusal to grant such permission will not be set up as a ground or for not completing the work within the contract period.

If on the other hand the Engineer requires that the work shall be proceeded with on days and at times otherwise normally non-permissible under this contract the contractors shall proceed with the work but they will not be required in such cases to bear the cost of the Municipal establishment employed at the time. A six hours work at night will be considered as equal to day's work. Such number of days and hours as may be worked under these exceptions will be taken into account in determining the contract period fixed for completion of the works.

The contractors at all times during the continuance of this contract shall in all their dealings with local labour for the time being employee on the works contemplated by this contract have due regards to all local festivals and religious or other customs and all disputes, matters and questions arising between the contractors and any of their Agents on the one hand and any local labour on the other hand with respect of any matter or thing in any way connected with this contract shall be decided by the Commissioner whose decision shall be final and binding on all parties.

The contractor shall not enter upon or commence any portion of work except with the authority and instructions of the Engineer-in-Charge or of his subordinate in charge of the work failing such authority the contractor shall have no claim to ask for measurements of or payment for work.

THE CORPORATION MAY DO PART OF THE WORK

Upon failure of the Contractor to comply with any instructions given in accordance with the provisions of this contract, the Corporation has the alternative right, instead of assuming charge of entire work to place additional labour force, tools, equipments and materials on such parts of the works, as the Corporation may designate or also engage another Contractor to carry out the work. In such cases, the Corporation shall deduct from the amount which otherwise becomes due to the Contractor, the cost of such work and materials with 10% added to overall departmental charges and should the total amount thereof exceed the amount due to the Contractor, the Contractor shall pay the difference to the Corporation.

Contractor to note that SMC shall appoint Project Management Agency/Third Party Agency for the supervision/inspection of the work and they have to work under them.

61. ACCESS TO THE SITE

During the progress of the Work, the Contractor shall keep the site reasonably free from all unnecessary obstructions. The existing roads or water courses or pipes, electrical line and conduits shall not be blocked, cut through, altered, diverted or obstructed in any way by the Contractor, except with the permission of the Engineer-in-Charge in writing.

All operations necessary for the execution of work and for construction of any temporary work shall, so far as compliance with the requirements of the Contract permits, be carried on so as not to interfere unnecessarily or improperly with the convenience of the public or access to the use and occupation of public or private road, including approach roads from the main road and footpaths, and of properties whether in the possession of the SMC or any other person / organization.



All compensation claimed for any unauthorized closure, cutting through, alteration, diversion or obstruction to such roads or internal plant piping, etc. against the contractor or his agent or his staff shall be recoverable from the Contractor by deduction from any sums which may become due in terms of the Contract or otherwise according to Law.

62. SETTING-OUT OF WORKS

The Contractor shall be responsible for the perfect setting out of the Works and for correctness of the positions, levels, dimensions and alignment of all parts of the works. All measurements shall comply with the dimension noted on the drawings and or as directed. If at any time during the progress of work, any error appear or arise in the positions, levels, dimensions or alignments of any part of the Work, the Contractor, on being required to do so by the Engineer-in-Charge, shall at his own cost and expense rectify such errors to the satisfaction of the Engineer-in-Charge notwithstanding that he may have been assisted by the Engineer-in-Charge in setting out the same earlier.

63. CARE OF WORKS

In the event of any accident or failure occurring or being likely to occur in or on the works which, in the opinion of the Engineer-in-Charge, required immediate attention either during the work period or the defect liability period, the Engineer-in-Charge may direct the Contractor by written notice to take necessary remedial action and if the Contractor fails to take action as directed by the Engineer-in-Charge within 7 days of such notice, the SMC and / or the Engineer-in-Charge may, by its own workmen or employing any other agency, make the necessary repairs or precautionary works and recover the costs from the Contractor.

64. SCHEDULE OF QUANTITIES AND RATES/PRICE

The Contractor shall neither be entitled for any revision of price owing to variations in actual quantities of work nor be entitled to any loss of consequential profits or for any other damages arising thereof. The Contractor shall be paid only for the actual quantities of work executed and according to the price or unit rates agreed to.

The price or unit rates agreed to under this contract shall be for the finished works (except to the extent specifically excluded) and shall be inclusive of all equipments, accessories, hard wares, fabrication works, support structures, tools and plant, transport, labour, hoisting, setting and fixing and including all royalties, taxes and duties, etc. and shall remain firm and free from any variations arising from the cost of materials, labour, equipment, etc. or due to increase in type and rate of taxes, duties, insurance, etc. or for any other reason whatsoever during the entire period of the contract / completion of the works.

The price or unit rates agreed to under this contract shall be deemed to compensate for all minor details, which are not specifically mentioned, but are fairly and obviously intended and are essential for the full and final completion of the works. Further, the Contractor is not entitled to make any extra claims for such works, if any.

Lump-sum Price to Cover All Items and Nothing Like Extra Item to Be Paid

Nothing extra over and above the quoted lump sum price shall be paid on account of financial implications of all the terms, conditions, specifications, and it will be treated that necessary financial provision is deemed to have been kept in the lump sum price by the Contractor. If any contiguous item or any provision or requirement, not included in Scope of Work, terms, Conditions and Specifications, etc. but is necessary for the completion of the works or its functional performance, shall be treated as incidental to the work/project and the same shall be provided by the Contractor within its lump sum price and nothing extra as 'Extra Item' shall be paid on this account.

If at any time after the execution of the contract documents, the Engineer-in-Charge shall for any



reason whatsoever, require the whole or any part of the work as specified in the tender, to be stopped for any period or shall not require the whole or part of the work to be carried out at all or to be carried out by the Contractor, he shall give notice in writing of the fact, to the Contractor who shall thereupon suspend or stop, the work totally or partially, as the case may be. In any such case, except as provided herein under, the contractor shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not so derive in consequence of the full amount of the work nor having been carried out, or on account of any loss that he may be put to on account of materials purchased or agreed to be purchased, or for unemployment of labour recruited by him. He shall not also have any claim for compensation by reason of any alteration having been made in the original specifications; drawings, designs and instructions may involve any curtailment of the work as originals contemplated. Where which however, materials have already been purchased or agreed to be purchased by the contractor, before receipt by him of the said notice, the contractor shall be paid for such materials at the rate determined by the Engineer-in-Charge, whose decision shall be final. If the contractor suffers any loss on account of his having to pay labour charges during the period during which to stoppage of work has been ordered under this clause the Contractor shall on application be entitled to such compensation on account of labour charges as the Engineer-in-Charge, the labour could have been employed by the contractor elsewhere for the whole or part of the period during which the stoppage of the work has been ordered as aforesaid.

If the Contractor or his workmen; or servants shall break, deface injure or destroy any part of a building in which they may be working, or any building, road, fence enclosure or grass land or cultivated ground continuous to the premises on which the work of any part thereof is being executed, or if any damage shall be done to the work for any cause whatever while it is in progress or if any imperfection becomes apparent in it within the Defect liability period mentioned above by the Engineer-in-Charge the contractor shall make good the same at his own expense, or in default the Engineer-in-Charge may cause the same to be made good by other workmen and deduct the expenses (of which certificate of the Engineer-in-Charge shall be final) from any sum that may be due or thereafter becomes due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof.

Compensation for all damage done intentionally or unintentionally or by the Contractor's laborers whether in or beyond the limits of the Municipal Property shall be estimated by the Engineer-in-Charge or such other office as he may appoint and estimates of the Engineer-in-Charge subject to the decision of the Commissioner on appeal be final and the contractor shall be bound to pay the amount of the assessed compensation on demand failing which the same will be recovered from the Contractor as damage from the security deposit or deducted by the Engineer-in-Charge from any sum that may be due or become due from the Municipal Corporation to the contractor under this contract or otherwise.

The contractor shall bear the expenses of defending any action or other legal proceedings that may be brought by any person from injury sustained by him owing to negligence of precautions to prevent the spread of fire and he shall also pay any damages and cost that may be awarded by the court in consequence.

65. Work Permission

No work shall be done on Sunday/Holidays without the sanction in writing of the Engineer-in-Charge.

66. WORKMANSHIP

The work to be done under the contract or any part thereof shall be executed in the best and most skilled workmanship like manner, with best and approved quality of equipment and both the work and the material/equipment should conform to the particulars contained in or implied by the



specifications and as referred to in the drawings or in such other additional directions, instructions and documents as may be found necessary and given time to time to the contractor during the execution of the works and to the entire satisfaction of the SMC and the Engineer-in-Charge.

The entire work shall conform to the latest and acceptable engineering practices and shall be such as to cause minimum transfer of noise and vibration to the building structures.

67. REMOVAL OF IMPROPER WORK AND Material/EQUIPMENT

The SMC shall have power to check and reject at any stage such work / equipment which it considers to be defective in quality or workmanship and nothing shall prevent from rejecting the materials brought to the site (i.e. materials made ready for use on works) which has been previously passed by the SMC or the Engineer-in-charge in an un-worked condition. The Contractor shall immediately arrange to replace the defective equipment by proper and suitable equipment with the approval of the Engineer-in-Charge and carry out rework of the rejected work at his own cost and expense and to the satisfaction of the SMC. In the event of failure on the part of the Contractor to carry out his obligations under this clause, the SMC shall have the right to get the work done through other agencies at the risk of the Contractor and recover the cost in full from the Contractor.

All rejected Material/equipments will at once be removed from the site by the Contractor to such distances as may be desired, failing which the Engineer-in-Charge after giving three days' notice in writing may do so and recommend to the SMC for recovering the cost of removal from the Contractor.

68. URGENT WORKS

If any urgent work (in respect whereof the decision of the SMC shall be final and binding) becomes necessary for safety of the work or personnel and the Contractor is unable or unwilling to carry it out, the Engineer-in-Charge shall have right to employ outside labour. All expenses incurred on it shall be recoverable from any sum payable to the Contractor.

69. DAMAGE TO SMC PROPERTY

If during the period of erection, the contractor or his workmen damage or destroy any part of the building structure or materials, the contractor shall be completely responsible for the damages and he will have to make rectification/replacement at his own cost. The decision of the Engineer-in-charge will be final.

70. VARIATIONS IN THE SCOPE OF WORK

The SMC shall have the power to make any alterations/ variations/ deletions/ additions or substitutions from drawings, specifications, designs and instructions that may appear in its opinion, be necessary or advisable during the progress of the Works and the Contractor shall be bound to carry out the work in accordance with the instructions which may be given to him by the SMC in writing. Such alterations / deletions / additions or substitutions shall form part of and be read as incorporated in the Agreement itself.

71. CLEARANCE OF SITE ON COMPLETION

As part of the work included in this Contract, the Contractor shall completely remove and satisfactorily dispose "off" all temporary works to the extent directed. He shall demolish and dispose of all temporary structure, shall remove or grade to the extent directed all embankments made for erection purposes, shall satisfactorily dispose "off" all rubbish resulting from the operations under this Contract and shall do all the work necessary to restore the territory embraced within the site of his operations to at least as good order and conditions as at the beginning of the work under this Contract.

No final payment in settlement of the accounts for the Works will become due and shall be made to



the Contractor till, in addition to any other conditions necessary for such final payment, Site clearance has been affected by him. In the event of his failure to comply this provision within fourteen (14) days after receiving notice to that effect, such clearance may be made by the Engineer-in-Charge at the cost and expense of the Contractor. In the event, it become necessary for the Engineer-in-Charge to have the Site cleared at the cost and expense of the Contractor, the SMC shall not be held liable for any loss or damage to the Contractor's property as may be made on the site and due to such removal there from.

72. EXTRA WORK

Work that is not included in the tender documents shall not be performed, except when approved/sanctioned in writing by S.M.C.

Rates for additions or extras

Any additional item of work over and above those schedules in the tender are to be carried out at the same basic rates as quoted in the tender for the same type of work.

Rate for extra items, as far as possible will be derived from the quoted tender items where it is not possible to do so, the same shall be arrived at by adding 15 % towards overhead and profits on the actual cost of labour, material and plant and machinery input as approved by Engineer-in-Charge.

No claim for any extra or compensation for damage will be entertained on account of such variation, except where the quantity is increased by more than 30 %.

No claim for any extra or compensation for damage will be entertained on account of such variation where the quantity is decreased to any percentage or where the item is totally deleted.

Before payment of final bill on completion of the work, total amount of that work done at sanctioned rate shall be considered with the total amount of work done, had it been executed at the rate of second tenderer. While comparing total amount, quantity to be taken into consideration will be the quantity executed and not the quantity put to tender and will also include variation of quantity within the limits of quantity executed as per clause i.e. 30 % of the estimated quantity.

73. EXTENT OF DEVIATION OR VARIATION

The Contractor is not to vary / deviate from the approved scheme, its drawings and specifications or instructions or execute any extra work of any kind whatsoever unless upon an order in writing is given by the SMC in this regard. If compliance with the SMC's aforesaid order or approval involves extra work, and/or expense beyond that involved in the execution of the works as per contract, then unless the same were issued in consequence of some breach of this contract on the part of the Contractor, the latter shall be paid the price of the said work (to be valued as hereinafter provided) and/or the expense aforesaid.

74. MODIFICATIONS TO THE CONTRACT

There are no other understandings between the parties other than this Contract Document.

In the event of any of the provisions of the Contract require modifications after the Contract Documents have been signed, except those directions and orders given by the SMC under the Contract for the due execution of the works, the modifications shall be made in writing and signed by both the parties before giving effect to such modifications.

75. COMMENCEMENT OF WORKS

The Contractor, having signed the Contract with the SMC, shall commence the work within the period stipulated in the document.



The Engineer-in-Charge may direct the Contractor to use so much of the site as may, in the Engineer-in-Charge's opinion, be required in order to enable the Contractor to commence and continue the work and shall from time to time, as the work proceeds, give the Contractor the use of such further portions of the site as the Engineer-in-Charge may from time to time consider proper and adequate in that regard. Phased delivery in the manner aforesaid of the use of site or any other facilities to be afforded to the Contractor shall not entitle the Contractor to any claims whatsoever.

If the Contractor commits default in commencing the execution of the work as aforesaid, the SMC shall, without prejudice to any other right or remedy, be at liberty to forfeit the Earnest Money Deposit absolutely.

76. WARRANTY

WARRANTY FOR MATERIAL/EQUIPMENT

With respect to the Material/equipments provided by the contractor under this contract, the contractor shall be deemed to have furnished to the SMC.

Of Title

"The Contractor warrants that the Material/equipments are not subject to any security interest, lien or other encumbrance"

Against Patent Infringements

"The Contractor shall at his own expenses defend and save the SMC harmless from the expenses and consequences of any suit or procedure brought against the user so far as the said suit or procedure is based on a claim that the equipment provided constitute an infringement of any patent in existence on the date of the contract".

"In addition, the Contractor shall secure at his own expense a fully paid up license or license that will permit the user to continue operation of the equipments provided, free of further claim for infringement".

Of Performance

"The Contractor warrants that the equipment provided are suitable for the purpose or the purposes, for which such goods are used, conform to promise or affirmations made by the contractor and conform to specifications stipulated in the Contract".

Of Fitness

"The Contractor warrants that the equipments provided are suitable for the particular purpose stipulated in the contract. The SMC affirm that it has relied on the contract's skills and judgments to select or provide equipment for a particular purpose".

Of Quality

"The Contractor warrants that the equipments are new and of best quality and that the equipment will be free of defects in design, workmanship or materials".

BREACH OF WARRANTY

In the event of a breach of warranty, the contractor shall be required to take all necessary action at his cost and expense to correct the breach in the most expeditious manner dictated by the existing circumstances.

Upon oral or written notification of defects or malfunctioning of equipment during normal operation, which requires corrective action, the Contractor shall send the necessary personnel with the required



materials, tools, test equipment and such other items to site to supervise and assume responsibility for repair. If the Contractor does not expeditiously take steps to correct the defects, the Engineer-in-Charge may at its option do so. However, such action on the Engineer-in-Charge's part, will not release the Contractor of his responsibility and the Contractor inter-alia shall reimburse all the expenses incurred by the Engineer-in-Charge to repair or replace malfunctioning or non-conforming equipment.

77. MAINTENANCE AND DEFECTS

AFTER SALES SERVICE

The Contractor shall ensure that adequate and prompt after sales service in the form of maintenance personnel and spares as and when required with a view to minimize the breakdown period. Particular attention shall be given to ensure that all spares are easily available during the normal life of the equipment.

78. RIGHTS, REMEDIES AND POWERS

TERMINATION OF CONTRACT DUE TO CONTRACTOR'S DEFAULT

If the Contractor

Abandons the work;

At any time, defaults in proceeding with the works with due diligence and continue to do so after a notice in writing of 7 days from the SMC; or

Commits default in complying with any of the terms and conditions of the Contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him to that effect by the SMC; or

Persistently disregards the instructions of the SMC and / or Engineer-in-Charge or contravenes any provision of the Contract; or

Fails to remove material from the Site or to pull down and replace Work after receiving from the Engineer-in-Charge notice to the effect that the said materials or works have been rejected or

Fails to complete the works or items of work on or before the stipulated date(s) of completion and do not complete them within the period specified in a notice given in writing to that effect by the SMC; or

Offers or gives or agrees to give to any person in the SMC's service or to any other person on this behalf, any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or

Shall enter into a contract with the SMC in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have previously been disclosed in writing to the SMC or

Shall obtain a Contract with the SMC as a result of non-tendering or other non-bonafide methods of competitive tendering; or

Assigns, transfers, sub-lets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be sub-letting) or attempts to assign, transfer or sub-let the entire works or any portion thereof without the prior written approval of the SMC:

The SMC may, without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to the SMC by written notice determine the contract either as a whole or in part.

Or otherwise specified elsewhere in contract.



79. PACKING, MARKING, PROTECTION AND DISPATCH OF EQUIPMENT

The Contractor shall be held liable for all damages or breakages to the Material/equipment due to the defective or insufficient packing as well as for corrosion due to insufficient protections.

The Contractor shall arrange for dispatch of the Material/equipment by rail/road/ship after proper packing protection. The consignments shall be dispatched after inspection or otherwise, if agreed to, on freight paid basis, irrespective of the basis of price.

80. CONTRACTOR TO MAKE FACILITIES AT SITE

The Contractor shall make temporary arrangements at his own cost and expense for any approaches/accesses required for the movement of men and materials to his working places and material yard. If directed by the Engineer-in-Charge, the Contractor shall remove and make good temporary arrangements after completion of the works.

81. INCOME TAX

Income Tax on gross amount billed by the Contractor, as per prevailing statutory rules will be deducted as per Section 194(c) of Income Tax Act.

82. CONSTRUCTION CESS

Construction Cess on gross amount billed by the Contractor, as per prevailing statutory rules will be deducted as per Labour & employment development GR No.CWA/2004/841/M-3, Date: - 30/01/2006 of Gujarat Government.

83. REALESE OF SECURITY DEPOSIT ACCORDING TO WORK DONE

In case the total amount of work done is less than 5 % of the contract value, prorata S.D. to that extent may be refunded to the contractor while releasing the payment of final bill. In soft, the S.D. to be retained by the Corporation after payment of final bill shall be equal to 2% of the amount of final bill as per the prevailing norms or as per the norms decided from time to time.

If there is increase in amount of work more than 5% of the contact value. The Additional S.D. shall be recovered from the running bill. When the total of any of work done by the contractor up to running bills under consideration is more than 5% of the contact value. However, such S.D. shall be recovered in the round figure of Rs.1000/- i.e. the amount of work done when it exceeds 5% of the contract value it shall be refunded of to the nearest multiple of Rs.25000/- such additional S.D. shall be recovered for the works amount to Rs. 5 lacs or more at the rate of 4% of the additional amount.

In many cases, the contractors are stopping the work half-way due to number of reason and when the department has to take sections in accordance to clauses mentioned elsewhere in the tender document of the contract the remaining work has to be carried out by advertising the tender for the remaining work and the whole administrative process right from inviting tenders to finalizing the tender etc.

In such cases a fixed amount of Rs. 1000/- should be reversal from the original contract towards the cost of advertisement and other administrative charges incurred by the department in finalizing the contract for the remaining work.

In case a separate advertisement is issued for a single work actual cost of advertisement shall be recovered such recovery shall be in addition to the recovery shall be in addition to the recovery to be made under clause mentioned in elsewhere in the tender document or such other relevant clauses.

84. DISPUTES AND JURISDICTION

Except where otherwise specified in the contact the decision of the commissioner shall be final,



conclusive and binding on all parties to the contract upon all questions relating to the meaning of the terms, conditions, specifications, drawings, designs and instructions hereinbefore mentioned and as to the quality of workmanship, or materials used on the work, or as to any other question, claim, right, matter, or thing whatsoever in any way arising aloof, or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions, or otherwise concerning the works or the execution or failure to execute the same, whether arising, during the progress of the work or after the completion or abandonment thereof.

Disputes if any shall be discussed and mutually settled and in case of disagreement the same shall be referred to Commissioner / Standing Committee. After referring to Commissioner / Standing Committee if the said dispute is not solved, the same is referred to the court subject to Surat jurisdiction only.

85. LEGAL COSTS

Legal Costs incurred by the SMC in the event of litigation or other legal proceedings arising from this Contract agreement shall be borne by the Contractor.

This tender document contains technical bid and price bid, forwarding letter and other documents like Tender Fees, EMD, Addenda / Corrigendum, Registration copy, Authorization, Company Profile, Experience Certificates/List of clients along with Technical data, catalogues, performance curves, Annexures & Data sheet of Technical Bid, other Technical and General Specifications should be furnished duly filled in and signed. No pages can be removed from the conditions of contract, specification of drawings, otherwise it will be considered as an intentional fault and tenderer will be liable for rejection and the amount of earnest money deposit forfeited.

86. Site Investigations

The contractor shall visit the project sites prior to submitting bid, carefully inspect all areas, and become acquainted with the existing conditions and work to be carried out. No dispute shall be entertained later on in this regard.

87. The contractor shall not enter upon or commence any portion of work except with the written authority and instructions of the Engineer-in-charge or of his subordinate in charge of the work failing such authority the contractor shall have no claim to ask for measurements for payment of work.
88. Disputes if any shall be discussed and mutually settled and in case of disagreement the same shall be referred to Commissioner/ Standing Committee. After referring to Commissioner/ Standing Committee if the said dispute is not solved, the same shall be referred to the court subject to Surat Jurisdiction only.
- 89. ALL CLAUSES ARE OF GENERAL IN NATURE; BIDDER/ CONTRACTOR MUST FOLLOW; WHICHEVER IS/ ARE APPLICABLE FOR WORK UNDER CONSIDERATION.**

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -



MEMORANDUM

FOR REVISED DATE(S), REFER ADDENDA ISSUED (IF ANY)

Name of the Work: - Empanelment of contractors/agencies for Unit rate work for supply, erection, testing and commissioning of street light system in various societies and TP Roads Width of 12 to 24.00 Mtr. within Surat Municipal Area.

Notice: -

The Tender will be received up to 5:00 PM on 02/12/2019 TO 10/12/2019 by R.P.A.D / SPEED POST only and will be opened on next working day if possible, in presence of those tenderer who those to remain present on the occasion.

à Table # 09

Sr. No.	Particulars	:	Value/ Description
(1)	General Description of works	:	Empanelment of contractors/ agencies for Unit rate work for supply, erection, testing and commissioning of street light system in various societies and TP road up to 9 Mtr. Width within Surat Municipal Area.
(2)	Estimated Cost	:	Rs.45,30,650.00
(3)	Earnest Money Deposited	:	Rs. 45,307.00
(4)	Tender fee	:	Rs. 2,688.00
(5)	Required registration class	:	Experienced.
(6)	Last Date of online submission of Price bid	:	02/12/2019 up to 18:00 hours
(7)	Submission of Technical Bid Papers, Tender Fee, EMD and other documents etc. In hard copy to Chief Accountant, SMC, Muglisara, Surat.	:	up to 10/12/2019 @ 05:00 PM by Registered post or Speed Post only.
(8)	Performance guarantee cum security deposit	:	5.0% (2.0% in case of SITC works) of Tender amount.(As per tender) Security Deposit should be in the form of cash/ DD/ pay order in case of work amounting less than equal to Rs. 2.00 Cr.
(9)	Time Allowed for the Completion of contract from date of intimation.	:	As per table #01
(10)	Compensation for delayed work	:	0.2% (Zero-point Two Percent) of the tender value of unexecuted work per day of delay subject to maximum 10% of work order value/ actual work done.



(11)	Percentage to be retained from running account Bill	:	As per Payment condition
(12)	Defect Liability Period	:	12 months of the date satisfactory commissioning of entire streetlight system.

SEAL & SIGNATURE OF THE TENDERER: -

I/C. Executive Engineer,
Light & EEC,
Surat Municipal Corporation.



PART III

TECHNICAL SPECIFICATIONS



DETAILED TECHNICAL SPECIFICATIONS

à **Table # 10: Illumination Design & Relevant Data Sheet**

Sr. No.	Parameters	6 to 9 m width	12 m width	15 m width	18 m width	18 m width	24 m width
(1)	Average Illumination	4 lx	8 lx	15 lx	15 lx	15 lx	15 lx
(2)	Uniformity Ratio	0.30	0.30	0.40	0.40	0.40	0.40
(3)	Transverse Uniformity	0.20	0.20	0.33	0.33	0.33	0.33
(4)	Longitudinal Uniformity	0.40	0.50	0.70	0.70	0.70	0.70
(5)	Arrangement	Side	Side	Side	Side	Central	Central
(6)	Type of Luminaire	LED	LED	LED	LED	LED	LED
(7)	Average Span	23 m	25 m	30 m	30 m	30 m	30 m
(8)	Height of Pole	6.00 m	7.00 m	10.00 m	10.00 m	9.00 m	9.00 m
(9)	Bracket Cap Height	To be adjusted as per requirement(s). Moreover, overlapping must be min. 0.3 m on pole with max. height of bracket cap should be 0.6 m.					
(10)	Bracket Arm	Single	Single	Single	Single	Double	Double
(11)	Bracket Arm Length	0.50 m	1.50 m	2.00 m	2.00 m	2.00 m	2.00 m
(12)	Max. efficacy of LED luminaires	125 lm/ W					
(13)	Initial Lumen Output of LED luminaires (min.)	1,400 lm	4,000 lm	13,800 lm	13,800 lm	8,250 lm	8,250 lm
(14)	Input of LED luminaire (max.)	15 W	40 W	120 W	120 W	75 W	75 W
(15)	Height of Pole	6 m	6 m	8 m	9 m	7 m	8 m
(16)	Mounting Height of Luminaire	6.55 m	7.00 m	9.00 m	11.80 m	8.00 m	10.00 m
		Variation of $\pm 2\%$ will be allowed to achieve desired illumination parameters					
(17)	Tilt Angle wrt road surface	10°	15°	15°	15°	10°	10°
		0° to 15° (to achieve required parameters, it can be adjusted within the limit)					
(18)	Average Spacing	25 m	22 m	30 m	30 m	30 m	30 m



❖ GI pole:

1. SCOPE:

The scope of work broadly covers supply, erection, testing and commissioning of various types of GI poles. This specification gives the general requirements. It shall be the responsibility of the contractor to take the joint measurement and obtain SMC's approval before the placement of orders to the main supplier/manufacturer.

2. STANDARDS:

The GI pole should meet the requirements of the following standards and rules:

- a) Indian Electricity Acts and Rules
- b) IS 226/ IS 2062
- c) BS 5649: part 6 1982
- d) IS 2629/IS 2633/IS 4759

Please note that among the various standards mentioned, most appropriate will be applied. All codes and standards mean the latest. Where not specified, the installation shall generally follow the Indian Standard Code of Practice and/or best engineering practices.

3. DETAILED SPECIFICATIONS:

3.1GI Pipe pole:

The poles should be **with MS base plate** and as per given information in tender (Table NO.12)and confirming to relevant standards with latest amendment(s): -

à **TABLE # 11**

Height of Pole	As per given information in tender.
Dimensions/ Size	
Planting depth of Pole	
Approx. weight of each pole with base plate	
Base Plate Size (L X B X thickness)	

3.1.1 The **tolerances** for outside diameter, thickness and length shall be as per the relevant IS. The tolerance shall not be applicable to the weight of poles. I.e. the weight of pole mentioned above shall be without any tolerance.

3.1.2 **Painting:** The poles shall be coated with black bituminous paint up to the planting depth externally and remaining exterior portion shall be coated with one coat of red oxide and 2(Two) coats of aluminium paint after erection prior to commissioning.

3.1.3 **Earthing:** The pole shall be provided with 12 mm Ø tapped hole with bolt-nut welded for Earthing at 2.5 m height from base plate.

3.1.4 **Weight:** The pole weight should be verified in presence of representative of SMC at SMC



Weigh Bridge.

3.2 GI Octagonal/Conical pole:

3.2.1 DESIGN CONSIDERATIONS: -

Poles shall be designed to withstand the maximum wind speed 159 km/hr & Maximum stress at design wind speed shall not exceed 80% of the strength of steel. The detail of top loading i.e. the weight and area of top luminaries should be worked out based on this consideration. Maximum deflection of the pole shall meet the requirement of BS 5649: part 6 1982.

3.2.2 CONSTRUCTIONAL FEATURES: -

Pole shaft:

- The pole shall be **hot dip galvanized** as per IS 2629/IS 2633/IS 4759 standards with minimum coating thickness **65 microns** considering operating conditions of the city.
- The pole shaft shall have shape conical/octagonal, as specified, and it should be with single longitudinal welding. There shall not be any circumferential welding. The welding of pole shaft shall be done by Submerged Arc Welding process using state of the art know how.
- All Pole shafts shall be single piece and shall be provided with the rigid flange plate of suitable thickness with provision for fixing four bolts. This base plate shall be fillet welded to pole shaft at two locations i.e. from inside and outside and supports to be provided.

Terminal Box/Plate:

- Integral Junction box consist of terminal plate of min. 6 mm Hylam sheet, standard profile 35 X 7.5mm DIN-Rail as per EN 50022 for MCB mounting and stud type terminal. If a particular light fitting has to be manually operated the same can be done by MCB provided on terminal plate. Terminal plate shall be suitable for loop-in-loop-out of max. 4 Core x 25 sq mm armoured cable.
- The cable shall be terminated at connector in the pole using ISI Marked PVC 1.1 KV grade insulating tape roll with appropriate colour code.
- There shall also be welded a clit of size 40 x 40 x 4 mm for the purpose of earthing.

Termination (lugs, gland, labour) cost should not be considered in the cost of pole.

Door

- **Door height** shall be as specified below (as applicable) and door opening should be hinged type with necessary special locking bolt. Suitable plate shall be provided for cable gland support. Pole drawing from manufacturer must be get approved from concerned department.
 1. For Side arrangement of poles: - Door height (Top portion of the door) should be 1,500 mm above from the base plate
 2. For Central arrangement of poles in divider and Bridge: -Door height (Top portion of the door) should be 1,000 mm above from the base plate.
 3. In case of poles to be mounted on parapet wall: 500 to 750 mm to be got approved prior to supply



4. Door opening should be hinged type with necessary special locking bolt. Door should be minimum 500 mm. Suitable plate of min. 3 mm size shall be provided for cable gland support.

- The pole shall be adequately strengthened at the location of the door to complete for the loss in section.
- The door opening shall be carefully designed and reinforced welded steel rod, to avoid undue buckling of the cut section under heavy wind conditions.

Base Plate:

- The base plate **in case of poles to be mounted on parapet wall** (of bridge and similar structure) shall be manufactured as per site requirements. The adopter base plate if required shall be supplied and installed free of cost. The dimensions like centre to centre distance of bolts and PCD etc. shall be accurately measured (for each pole base plate).
- It shall be responsibility of contractor to clean foundation bolts and make foundation ready for installation.

Nut bolts/fasteners/terminal/J bolts etc:

- All Nut Bolts/fasteners/ terminals shall be galvanised for anti-corrosive treatment. This item also includes J Bolt which shall be supplied by pole manufacturer only.

PU Painting:

- PU painting, if mentioned specifically in tender, shall be provided. Black charcoal colour is preferred; however, colour shall be got approved prior to supply.

à **Table # 12 The detailed dimensions of Octagonal Poles are follows: -**

Height of Pole	O.D. TOP (Min.)	O.D. BOTTOM (Min.)	THICK-NESS (Min.)	Preferable BASE PLATE (Min.)	Bolt Details	Length of J Bolt	Min. Size of Foundation (L x B x H in mm)
3 m	70	130	3 mm	200 x 200 x12	4-M16	450 mm	500 X 500 X 1300
4 m	70	130	3 mm	200 x 200 x12	4-M16	450 mm	500 X 500 X 1500
5 m	70	130	3 mm	200 x 200 x12	4-M16	600 mm	500 X 500 X 1500
6 m	70	135	3 mm	200 x 200 x12	4-M20	600 mm	500 X 500 X 1600
7 m	70	135	3 mm	225 x 225 x 16	4-M20	600 mm	500 X 500 X 1600
8 m	70	155	3 mm	260 x 260 x 16	4-M20	600 mm	500 X 500 X 1650
9 m	70	155	3 mm	260 x 260 x 16	4-M24	750 mm	500 X 500 X 1850
10 m	70	175	3 mm	275 x 275 x 16	4-M24	750 mm	500 X 500 X 2000
11 m	90	210	3 mm	300 x 300 x 20	4-M24	750 mm	500 X 500 X 2200
12 m	90	240	3 mm	320 x 320 x 20	4-M24	850 mm	500 X 500 X 2500

3.2.3 MATERIAL

- **Octagonal/ Conical Poles:** - As per BSEN 10025 grade S355 J0. Yield strength Min. 355 N/mm² or equivalent national/international standard.
- **Foundation Bolts:** - EN 8 grade
- **Base Plate:** -Steel as per IS 226/ IS 2062



- Please note that among the various standards mentioned, most appropriate will be applied and will be binding to contractor.

3.2.4 DRAWING APPROVAL:

- Product manual & spare parts list along with drawing of Pole & Bracket must be submitted along with offer for each product quoted.
- **G.A. drawing of pole, Data Sheet and Quality Assurance Plan (For testing by client at manufacturer's works) shall be got approved before starting manufacturing.**

3.2.5 TESTING OF POLES:

- The Poles must be got tested/ inspected for all tests at manufacturer's works in presence of corporation's/ TPI's representative before supply. The supplier must make all the arrangement for testing/inspection at manufacturer's works without any extra cost to the corporation. 7 days' clear prior notice should be given for testing/inspection. All the material/equipment/accessories must confirm to the relevant IS with its latest amendments. **If quantity is less than 25 nos., supplier should submit internal test reports of pole** and contractor has to make necessary arrangements for onsite checking of Galvanizing coating thickness of pole with valid calibrated meter prior to installation.
- All the material/equipment/accessories poles should be supplied with manufacturer's test certificates.

Pole Brackets:

1. For GI Steel Tubular Pole: -

Single/Double/Triple arm 1 m (Horizontal) with cap/ sleeve of 0.3 m

The single/ double/ triple arm bracket, consisting of "B" Class GI pipe of 25 mm ID (min.)/suitable dia., complete with approx. 0.3 m GI sleeve tubing of appropriate dia; suitable for poletop having nuts and bolts for fixing the bracket and having spread (Horizontal) of 1 m, with suitable welded stiffener-reducer and nipple with check nut shall be erected on the top of 6 m pole at an angle of as per design of the luminaire. The bracket should be painted with one coat of red oxide and two coats of aluminium paint.

Arm angle shall not more than 105° with vertical plane/Tilt (Arm) angle must be maintained suitably to achieve lux level as per requirements mentioned in the illumination design data sheet (Table # 04).

2. For Octagonal & Conical Pole: -

(a) Single arm 1 m to 2.0 m

(b) Double arms 1 m to 2.0 m

(c) Triple arms 1 m to 2.0 m.

Design:

Streetlight bracket, single / double / triple arm, shall be manufactured and supplied from pole manufacturer only. It should be made from hot dip galvanised as per IS 2629/ IS 2633/ IS 4759 standards and having the suitable spread & cap height as per following specification. Tilt (Arm) angle must be maintained suitably to achieve lux level as per requirements mentioned in the illumination design data sheet.

**Material:**

B Class M.S. Pipe (As per IS: 1161/IS: 1239 with Latest amendment) of min. 3 mm thickness and having diameter suitable for pipe entry of luminaire with Horizontal spread of 1 m to 2 m.

Sleeve tubing:

B Class M.S. pipe (As per IS:1161/IS:1239 with Latest amendment) of min. 3 mm thickness sleeve tubing suitable for required size of pole top having 300 mm height (Approximately 200 mm overlapping on pole and remaining 100 mm for adjustment of the luminaire mounting height) with nuts and bolts for fixing the brackets.

The bottom and top of the bracket's sleeve shall be manufactured in such a way that, it can be properly fit on the top of the pole/ snapped in tightly on the pole top and bracket's fitment on poles with/ without nut(s) and bolt(s) as per the requirements. Stiffener plate shall be provided with bracket.

The drawing(s) shall be got approved from the department. Bracket will also be tested at manufacturer's works along with the streetlight poles.

Cement Concrete foundation**a. For 6.0 Meter GI pipe pole**

Providing and constructing Cement Concrete foundation for GI pipe poles and Reinforced Cement Concrete Foundation for hot dip galvanized octagonal / conical streetlight poles:

1:2:4 cement concrete foundation from base plate (with base plate and cable guard pipe and earthing wire/ strip etc. which included in other items) of 300 mm dia. & 1,500 mm length for 6 m GI poles.

The item includes excavation and supply of cement, sand, kapachi/ grit etc. by the Contractor. The Contractor should make necessary arrangement for water required for the works at his own cost.

Foundation above the ground should be finished with plaster and whitewash and having sloped to prevent accumulation of water. The site should be cleaned of excess material/ debris after the work is completed, without any extra cost.

b. For Octagonal and Conical pole

Reinforced Cement Concrete (RCC) foundation having Grade M20 along with necessary Foundation Bolt, Nuts, Washers with anchor plate and DWC pipe for cable access etc. shall be casted having minimum size as shown in table No. 12 or recommended by pole manufacturer with necessary plastering and lime wash. Also, J Bolt and Nut shall be covered with Cement Concrete/Plastering after installation and alignment of pole.

The item includes excavation, 3" PCC M10, necessary reinforcement recommended by pole manufacturing company, Shuttering and M20 grade CC from M20 grade CC. The Contractor should make necessary arrangement for curing required for the works at his own cost.



The site should be cleaned or excess material should be removed after the work is completed. While making foundation, best civil engineering practice(s) must be exercised. Bidder must take approval of foundation drawing before carrying of work. This section should be finished in decorative manner as directed by Engineer-in-charge.

Cables & Wires

Aluminium conductor armoured cables & cu conductor fitting wire/ cable: -

SLTC of Aluminium conductor armoured cables (4C X 6/10/16/25 sq.mm.):

The cable shall be multi stranded aluminium conductor, XLPE/ PVC insulated/ sheathed, having round wire armoured of galvanized steel, 1.1 kV grade confirming to relevant IS specifications bearing ISI marked. The specifications of the cables are as mentioned in the **Table below:**

à **Table # 13** **Cable Data Sheet: -**

Sr. No.	Detail	Data/Information
1	Type of Cable	A2XWY (A2XFY FOR 25 MM2)
2	Voltage Grade	1.1 KV
3	Applicable Standard	IS: 7098 Part I
4	Cable Core x Cable Size mm2	4 x 6/4 x 10/4 x 16/4 x 25
5	CONDUCTOR	
	a. Material	Stranded Aluminium
	b. Nominal Cross section area (mm2)	6/10/16/25
	c. Max. DC resistance at 20° CΩ/ km (max.)	4.61/3.08/1.93/1.23
6	INSULATION	
	a. Material	XLPE
	b. Nominal Thickness (mm) Avg. Minimum	0.70/0.7/0.7/.9
7	Core Identification	As per Cl. no 10.1 of IS 7098 (part :1)
8	INNER SHEATH	
	a. Material	As per Cl. no 5.2 of IS 7098 (part :1)
	b. Minimum Thickness (mm)	Minimum 0.3 mm
9	ARMOUR	
	a. Material	Galvanized steel round wire/Strip for 25 mm2
	b. Size of Armour	As per IS standard
10	OUTER SHEATH	
	a. Material	PVC
	b. Nominal Thickness (mm)	As per IS



	c. Identification	Manufacturer's Name, Trade mark, Voltage grade and words Electric cable and meter mark showing measurement of cable & shall embossed/ printed/ indicated at each 1 m throughout the length of cable
11	Approximate overall diameter (mm)	As per IS
12	Max. Conductor temperature during short circuit	As per IS
13	Max. Short circuit current for 1 sec.	As per IS
14	Max. Conductor temperature during short circuit	As per IS
15	Continuous current rating for STD. in condition laid direct	
	In ground	As per IS
	In air	As per IS
16	Standard Packing Length	1,000 m
17	Test	All acceptance Tests as per IS: 7098, Part I

The cable laying procedure should be as per relevant IS and NEC Code 2011. Any damage to other services during excavation, cable laying or refilling work shall be solely on the Contractor's account.

The following factors should be considered while laying the cable.

- I. Before laying, the insulation strength of the cable should be checked with Insulation Tester in presence of representative of corporation as a preliminary check against any probable damage.
- II. Manufacturer's test certificate must be furnished for cable of concerned work. If the quantity of cable is more/ equal than the standard packing drum, the cable must be got tested at manufacturer's works for all routine tests as well as acceptance tests presence of representative of TPI/ SMC before supply. If the quantity of cable required for the work is less than the standard packing drum length contractor is permitted to use the cable from tested cable drum only.
- III. Cable length marking at interval of one-meter length shall also be embossed/Printed/ indicated in figures.

Copper conductor Unarmoured cables (3C x 1.5/ 2.5 mm²):

The item includes supply, laying, testing and commissioning of round 3C x 1.5/2.5 mm² (as per IS: 694) for LED luminaries flexible unarmoured single PVC insulated copper conductor cable 1.1 kV grade to be laid through the pole from luminaries to junction box by experienced technician without any damage. The cable joint shall not be allowed. Also, Cable should be terminated in MCB and Luminaries using appropriate size copper lugs.



LED Luminaries: -

TECHNICAL SPECIFICATION FOR ENERGY EFFICIENT LED BASED LUMINAIRE UNIT FOR OUTDOOR STREETLIGHT: -

This specification is for technical and general requirements design, development, manufacturing, testing and SETC of energy efficient LED luminaire for streetlight complete with all accessories, LED lamps with suitable current control driver circuit and required optics including mounting arrangement.

3.1 CODES & STANDARDS: -

Followings IS & its latest amendments should be followed unless until specified: -

- (1) 16101: 2012 | General Lighting - LEDs and LED modules – Terms and Definitions
- (2) 16102 (Part 1): 2012 | Self- Ballasted LED Lamps for General Lighting Services: Part 1 Safety Requirements
- (3) 16102 (Part 2): 2012 | Self-Ballasted LED Lamps for General Lighting Services: Part 2 Performance Requirements
- (4) 16103 (Part 1): 2012 | Led Modules for General Lighting: Part 1 Safety Requirements
- (5) 16103 (Part 2): 2012 | Led Modules for General Lighting: Part 2 Performance Requirements
- (6) 15885 (Part2/ Sec 13): 2012 | Safety of Lamp Control Gear: Part 2 Particular Requirements Section 13: DC or AC Supplied Electronic Control gear for Led Modules
- (7) 16104: 2012 | DC or AC Supplied Electronic Control Gear for LED Modules - Performance Requirements
- (8) 16105: 2012 | Method of Measurement of Lumen Maintenance of Solid-State Light (LED) Sources
- (9) 16106: 2012 | Method of Electrical and Photometric Measurements of Solid-State Lighting (LED) Products
- (10) 16107 (Part 1): 2012 | Luminaires Performance: Part 1 General Requirements
- (11) 16107 (Part 2): 2012 | Luminaires Performance: Part 2 Particular Requirements, Section 1 LED Luminaire
- (12) 16108: 2012 | Photobiological Safety of Lamps and Lamp Systems

⇒ IEC 60529 Classification of degree of protections provided by enclosures (IP Codes)

⇒ All LED luminaires should be manufactured & supplied as per all applicable & relevant standards for various components as well as functioning as specified in the tender documents, purposes intendeds and keeping safer, longer & reliable operation up to 10 years' lifespan.

⇒ (i) Limits and methods of measurement of radio disturbance characteristic of electrical lighting and similar equipment (ii) LED modules for general Lighting-Safety requirements, (iii) EMC Immunity requirement, (iv) Electro Magnetic compatibility (EMC)- Limits for Harmonic current emission — (equipment input current ≤ 16 A per phase, (v) Environmental Testing: Test Z- AD: composite temperature/ humidity cyclic test etc. should be as per relevant international standard/ all applicable Indian standard(s).



- ⇒ Further, LED should be designed, manufactured and supplied as per relevant Indian/ international standards applicable for fixed general-purpose outdoor streetlight luminaires, Lamp control gear: particular requirements for DC or AC supplied electronic control gear for LED modules, DC or AC supplied electronic control gear for LED modules performance requirements and Self-ballasted LED lamps for general lighting services- Performance requirements.
- ⇒ IS 4905 Method for random sampling shall be applied unless it is specifically specified.
- ⇒ IES LM 79 LED luminaire photometry and electrical parameters measurement as applicable & IES LM 80 for lumen maintenance shall be applicable.
- ⇒ **All applicable relevant Indian Standards published till now for LED luminaires.**
- ⇒ **All LED luminaires offered must be approved by B.I.S. and obviously LED driver must be approved R-Number (Registration no. provided by BIS). Approved BIS certificate must be operative/ valid at the time of tendering/ during actual supply. Appropriate certificate(s) needs to be furnished with technical-bid & also during the supply of the offered/ luminaires to be installed.**

3.2 ENVIRONMENTAL CONDITIONS: -

The LED streetlight is to be used in city of Surat, which is in Southern part of Gujarat. It is well connected with rails & roads, situated on Mumbai Ahmedabad Railway and nearby road is NH # 48. The average atmospheric condition during the year is mentioned below. The equipment shall be designed to work in such environmental conditions:

- (i) Maximum ambient air temperature: **50° C**
- (ii) Minimum ambient air temperature: **5° C**
- (iii) Max. Relative humidity: **90%**
- (iv) Average Rainfall: **55+ inches**
- (v) Atmosphere: **Dusty and Heavy chemical smoke at times in certain areas.**
- (vi) Coastal area: **The equipment shall be designed to work in coastal areas, which are having humid, salt laden and corrosive atmosphere.**

3.3 CONSTRUCTIONAL FEATURES:

General: -

- a) Luminaries shall be made of die-cast aluminium/ extruded aluminium body with powder coated finish.
- b) Heat sink used should be aluminium extrusion having high conductivity. Heat sink should be integrated within luminaries and efforts shall be made to keep the overall outer dimension optimum such that it permits sufficient heat dissipation through the body itself to prevent abnormal temperature inside the luminaries and consequential damage to cover, gasket material, LEDs, lenses and drivers.
- c) LED must be mounted on Metal core PCB with suitable large area surface by means of fins to



Dissipate the conduct heat. The fins must be exposed to ambient flowing air.

- d) All luminaries shall be provided with toughened glass **of sufficient strength. UV stabilized poly carbonate material is also acceptable.** The luminaire should be provided with individual optical lens/ optical lens plate on the LED chip for achieving desired photometric distribution.
- e) **The minimum IK protection of optic cover shall be IK 06. Appropriate test certificate/ evidences shall be provided with the technical-bid.**
- f) Suitable number of LED lamps shall be used in the luminaries. **The manufacturer shall submit the proof of procurement of LEDs from OEMs at the time of testing.** Please clearly note that **LED chips used/ to be used in the luminaires must be from manufacturers mentioned in the vendor's list.**
- g) The electrical component of the LED must be suitably encapsulated with proper heat dissipation facility to function in environment conditions mentioned earlier. Further, **LED drivers used must be appropriately sealed.** Proper evidence(s) if required should be provided with the technical-bid, if required/ specifically asked for.
- h) The connecting wires/ materials used inside the luminaries shall be low smoke halogen free, fire retardant e-beam cable and appropriate surge protection(s) must be provided at input side.
- i) Design of the thermal management shall be done in such a way that it shall not affect the properties of the diffuser.
- j) Heat sink must be thermally connected to MCPCB/ LED light source. The LED Module(s), Driver gear, etc. shall be designed in such a way so that temperature of heat sink shall not exceed 70° C.
- k) The infrastructure for Quality Assurance facilities to verify/ test/ prove above specifications must be available at the manufacturing facility of the offered company (ies). Compliance shall be ensured with submission of appropriate evidence(s) with the technical-bid.
- l) **All fasteners must be of stainless steel.**
- m) **Cable gland(s) should be provided for cable entry/ exit.** All glands inside/ outside luminaries must **have IP 65/66 protection specifically mentioned for particular capacity of LED luminaires.**
- n) **Surge Protection: Internal surge protection** must be provided for all LED luminaires. **External surge protections** should be provided for capacity of LED luminaires in excess of 65 W capacity.

High power and high lumen efficient LEDs suitable for following features shall be used: -

- a) The working life of the lamp at junction temperature of 85° C (max) at operating current shall be more than 50,000 working hours of accumulative operation as per IES LM 80 with min. lumen maintenance of 70% of rated initial lumen and shall be suitable for continuous operation of 24 hours per day. These features shall be supported with datasheet.
- b) **Lumen maintenance report as per LM 80 guidelines shall be produced for the power LEDs used with the technical-bid.**
- c) Thermal management shall be in such a way that LED soldering point temperature shall not go beyond 75° C.



- d) The luminaries shall be so designed that the illumination level shall be evenly distributed and shall be free from glare. The lux distribution curve/ graph/ spatial distribution shall be submitted.

LED DRIVER specification used for streetlight: -

- Current waveform should meet relevant nation and international standard.
- LED Driver shall withstand voltage up to level mentioned elsewhere in tender and restore once normal working when normal voltage is applied.
- The life of the driver should be more than equal to 20,000 Hours.**
- Maximum Temperature rise $\leq 30^{\circ}\text{C}$ @ 45°C T_{amb} with safety margin of 10°C .
- The control gear should be compliant to relevant international standard/ all applicable Indian standard(s) as per the requirements.
- The driver of the luminaries should have Short Circuit, Over Voltage, over current, over temperature, Under Voltage, String Open protections.
- The LED driver must be confirming to IS 16104: 2012.**

The electronic components used shall be as follows: -

- The protective cum adhesive coating used on PCBs should be clear and transparent and should not affect colour code of electronic components or the product code of the company.
- The construction of PCBs and the assembly for components for PCBs should be as per IS standards.
- Specific mentioned of the Indian Standard(s) or international standard(s) does not relieve contractor to design, supply & installation of LED luminaires as designed to give intended performance up to lifespan of 10 years.**

à Table # 14 GENERAL DATA SHEET OF LED LUMINAIRES: -

Sr. No.	Parameter	Value/ Detail for LED Luminaires
1.	Rated Supply Voltage (AC, 50 Hz)	230/ 240 V
2.	Input supply voltage range	140 – 270 V
3.	Expected Input Frequency	50 Hz \pm 3%
4.	Working Temperature	+5° to +50° C
5.	Working Humidity	10% - 90% RH
6.	Normal Usage hours	Dusk to dawn range 10 hours to 12.75 hours/ day
7.	Average Power Factor	≥ 0.90
8.	Index of Protection Level (min.)	As per IEC 60529 IP 65 (up to ≤ 65 W capacity) As per IEC 60529 IP 66 (up to > 65 W capacity)
9.	Impact Resistance of the luminaires	IK 06 (min.)
10.	LED Chip Efficacy	135 lm/ W (min.)
11.	Driver Efficiency	$\geq 85\%$



12.	Junction Temperature of LED	$\leq 85^{\circ} \text{C}$
13.	Rated Life @ L70	50,000 burning hours at 35°C ambient temp.
14.	Nominal CCT	$5,000^{\circ} \text{K}$ to $6,000^{\circ} \text{K}$
15.	Dispersion/ Beam Angle	Minimum 120°
16.	Tilting angle	Fixed
17.	Overall Light Loss Factor of LED luminaires as per IS	0.70
18.	Colour Rendering Index	≥ 70
19.	Total Harmonic Distortion	$\leq 15\%$ (EMI/ EMC Certification)
20.	LED Chip Make	Cree/ Osram/ Nichia/ Philips Lumileds
21.	Minimum initial efficacy of Luminaire	100 lm/W (up to 65 W) 110 lm/ W (>65 W)
22.	Min. Initial Lumen Max. I/P power of LED luminaires	As per illumination design data sheet
23.	Distribution	Symmetrical (for floodlight) Asymmetrical (for streetlight)
24.	Mounting	Wall or surface through clamps (for floodlight) On streetlight pole through bracket (for streetlight)

3.4 Reduce rate/ penalty applicable: -

If guaranteed rated power input at fixed parameter is not achieved during the test. Municipal Corporation shall have,

⇒ The right to accept the luminaries & shall have right to charge penalty or reduce rate; in case of input power measured (during test) found more than the max. limit mentioned. The penalty/ reduced rates shall be Rs. 1,64,000.00 per kW; or (2) also right to reject the luminaries/ replaced it with appropriate input power. Decision of Additional City Engineer (Ele...) will be final and binding the contractor.

3.5 Details to be submitted by the bidder:

For proper assessment and due diligence on submissions, the Bidder should provide various information regarding LED chip/ drive/ luminaires as per **Annexure- III as mentioned earlier in the technical-bid.**

3.6 TESTS & CERTIFICATES:

Tests are classified as: –

- **Type test**
- **Acceptance test**
- **Routine test.**

The luminaire should be tested as per IEC 60598-2-3: 2002 standards and following test reports should be submitted: -

- I. Heat Resistance Test
- II. Thermal in SITU Test
- III. Ingress Protection Test



- IV. Drop Test
- V. Electrical/ Insulation Resistance Test,
- VI. Endurance Test,
- VII. Humidity Test,
- VIII. Electrical and Photometric Measurements Test Report (IES LM 79)
- IX. LED Lumen Maintenance Test Report (IES LM 80)
- X. Vibration test as per ANSI

Acceptance Tests: -

These tests are carried out by an inspecting agency/ engineer as per quality assurance plan/ details mentioned in the technical-bid. Acceptance tests shall not be carried out from particular size from the lot on which type tests have already been conducted. Recommended sampling plan is given below.

Sample size and criteria for conformity

The luminaries shall be selected from the lot at random. Appropriate method of sampling shall be applied as mentioned earlier in the technical-bid.

Routine Tests:

These tests shall be performed by the manufacturer on complete units of the same type and the results shall be submitted to the inspecting agency, prior to offering the lot for acceptance test. The firm shall maintain the records with traceability.

Method of Testing: -

⇒ **Visual and Dimensional Check:**

The unit shall be checked visually for all dimensions as per approved design and drawing.

General workmanship should be good; all the components properly secured and sharp edges shall be rounded off. Check the marking and quality of the workmanship visually. Check the rating and make of electronic/ electrical items.

⇒ **Checking of documents of purchase of LED**

Check Document of purchase of LED lamps of approved sources as mentioned in approved vendor's List.

⇒ **Resistance to humidity test**

This is carried out by suspending the painted panels in corrosion chamber maintained at 100% RH and temperature cycle of 42° to 48° C for 7 days and examining it for any sign of deterioration and corrosion of metal surface.

⇒ **Insulation resistance test**

The insulation resistance of the unit between earth and current carrying parts shorted together shall not be less than 2 MΩ when measured with 500 V megger.



⇒ **HV test**

Immediately after insulation resistance test, an AC voltage of 1.72 kV rms ($1,500 + 2 \times \text{rated voltage}$) of sine wave form of 50 Hz shall be applied for one minute between the live parts and frame. There shall not be any kind of break down, flashover or tripping of supply.

⇒ **Over voltage protection**

The LED Driver shall be cut off (preferably) once voltage exceeds 288 V AC. It shall be reconnected when supply comes within limit. However, higher cut-off voltage shall be permitted provided the input current to the LEDs should not exceed the rated current when operated upto cut-off voltage offered by the manufacturer.

⇒ **Surge protection**

It shall withstand a surge of 4 kV at the input terminals for all types.

⇒ **Reverse polarity**

The Luminaire shall withstand polarity reversal. It shall be operated with reverse voltage for Min. 1 minute at maximum value of voltage range. At the end of this period, the supply shall be made correct polarity and Luminaire shall operate in a normal way.

⇒ **Temperature rise Test:**

Temperature rise Test shall be conducted at 100 V ~ with full load. The temperature rise shall be recorded by temperature detectors mounted at the specified reference points on the body of semiconductors, capacitors and other components as agreed between purchaser and manufacturer. The maximum-recorded temperature under worst conditions shall be corrected to 55° C and compared with maximum permissible temperature (for power devices at junction). Under loading conditions as specified above, the corrected temperature of the power devices shall have a safety margin of minimum 10° C.

Temperature at junction shall not exceed 100° C when corrected to 55° C. The Luminaire shall also be subjected for short time rating after continuous loading to ensure the temperature rise is within the permissible limit. The maximum temperature rise of the electronics devices on the PCBs shall be in limit for industrial grade components suitable for 85° C environment. In case of exceeding limit, use of MIL-grade component shall be considered keeping RDSO informed.

⇒ **Ra (Colour Rendering Index) measurement test**

The lumen is the unit of luminous flux, which is equal to the flux emitted in a solid angle of one steradian by a uniform point source of one candela.

The initial reading of the chromaticity co-ordinates x & y shall be within 5 SDCM (Standards Deviation for Colour matching) from the standardised rated value as per Annex: D of IEC 60081- 1997.



The initial reading of the general colour-rendering index (Ra) shall not be less than the rated value decreased by 3.

The lumen maintenance of the lamp shall not be less than 80% of the initial lumen after 20,000 burning hours and 70% of the initial lumen after 50,000 hours. The initial lumen will be taken after 100 hours aging.

Photometric test shall be conducted as per Annexure: B of IEC 60081-97.

The lumen maintenance test shall be done as per Annexure: C of IEC 60081-97.

⇒ **Fire retardant Test**

Fire Retardant test shall be conducted as per IEC 60332-1 of the wire used in the luminaires.

⇒ **Test for IP protection**

This test shall be conducted as per IEC 60529.

⇒ **Environmental tests (Prototype Test)**

The Luminaire shall meet the following tests as prescribed in IEC-60571: -

- (i) Dry heat test.
- (ii) Damp heat test
- (iii) Test in corrosive atmosphere
- (iv) Combined dust, humidity and heat test

⇒ **Reliability Test**

The reliability can only be determined in actual service. However, the following tests shall be carried out on the prototype to simulate as close as possible, the service conditions.

There shall be no failure during this test.

- (i) The light unit shall be mounted in an oven maintained at 45° C.
- (ii) The light will be operated at the specified maximum voltage and at 45° C for a period of 100 hours.

⇒ **Photometry Test: -**

The test shall be carried out for Total Luminous Flux, Luminous Intensity Distribution, Electrical Power, Luminous Efficacy (calculation), Colour Characteristics– Chromaticity, CCT & CRI etc. as per IES LM 79.

⇒ **Life Test**

The lumen maintenance & life test shall be done as per IES LM 80 for LEDs.

⇒ **Endurance Test**

The Luminaire shall be kept “ON” with input voltage of 250 V ~ for 200 hours. After this the



Luminaire is subjected to 20,000 cycles of “ON” and “OFF”, each cycle consisting of 3 seconds “ON” and 10 seconds “OFF” period. Luminaire should survive this test. Test is to be continued for 20,000 cycles, followed by performance test.

⇒ **Safety:**

The Luminaire shall comply with the safety requirements as per IEC 61195.

⇒ **All Tests defined for acceptance other than LM 79 and LM 80 is allowed to be carried out at Manufacturer works.**

⇒ **Normally testing of LED luminaires to be supplied/ installed are to be done as mentioned in the Table # 08. The testing methodology mentioned wherein is for normal cases. Competent authority or concern department head of SMC can waive some or all tests, in special cases or quantity of the LED luminaires are less.**

à **Table # 15: Test Scheme of LED luminaires: -**

Sr. No.	Description of test	Prototype Test	Type Test	Acceptance Test	Routine Test
(1)	Visual and Dimensional check	Y	Y	Y	----
(2)	Checking of documents of purchase of LED	Y	Y	Y	Y
(3)	Resistance to humidity	Y	Y	---	---
(4)	Insulation resistance	Y	Y	Y	Y
(5)	HV	Y	Y	Y	Y
(6)	Over voltage protection	Y	Y	Y	Y
(7)	Surge protection	Y	Y	Y	---
(8)	Reverse polarity	Y	Y	Y	---
(9)	Temperature rise	Y	Y	---	---
(10)	Ra (CRI) measurement	Y	Y	---	---
(11)	Lux measurement	Y	Y	Y	---
(12)	Fire retardant	Y	Y	---	---
(13)	Test for photometric	Y	Y	Y	---
(14)	Environmental	Y	---	---	---
(15)	Reliability	Y	---	---	---
(16)	Life	Y	Y	---	---
(17)	Endurance	Y	---	---	---
(18)	IP protection	Y	Y	Y	---
**	Quality Assurance Plan/ Details				
(19)	Testing at	Approved Govt. Lab	Approved Govt. Lab	Mfr. works	Mfr. works
(20)	Testing by	---	---	SMC/ TPI	SMC/ TPI
(21)	Lot size for testing not less than	---	---	25 Nos.	---



(22)	Test Sample Size	---	---	Min. 10%.	---
(23)	Documentation to be submitted	Whenever asked	With technical bid	During testing at Mfr. works	During testing at Mfr. works
(24)	LM 79 and LM 80 test report & result	---	Must to be submitted with technical bid	---	---
(25)	Certificate for Impact Resistance Test	---	---	During testing at Mfr. works	

3.7 INFRINGEMENT OF PATENT RIGHTS:

Surat Municipal Corporation shall not be responsible for infringement of patent rights arising due to similarity in design, manufacturing process, use of the components, used in design, development and manufacturing of these light luminaires and any other factor which may cause such dispute. The responsibility to settle any issue rises with the manufacturer.

3.8 MARKING:

The following information shall be distinctly and indelibly marked on the housing:

- Year of manufacture/ Batch Number/ Serial Number
- **Name of Manufacturer (Engraving only, stickers not allowed)**
- Rated Input Power (W), Supply Voltage, Input frequency

CENTRALIZED CONTROL AND MONITORING SYSTEM UNIT with BYPASS FACILITY: -

SMC has already installed CCMS units in SMC area for street light network. Here the CCMS Unit means the outdoor unit to be installed on the site which will have ability to communicate with Centralized Software installed at Central Control Room (SMAC Centre) necessary data in bilateral way.

Bidder should supply, install, test, commissioning and maintenance of lighting controls (Centralized Control & Monitoring System– CCMS) for LED streetlights.

SMC has already executed CCMS system and all CCMSs can be monitored & controlled at central control room. The newly installed CCMSs must be duly integrated with existing system so that similar functions can be performed from the room.

For technical specification & features, please refer below.

General Features: -

Controller and Metering unit: -

- Schedule the timing of lights (pre-programmed based on astronomical clock or on field or through central control)
- ON / OFF Switch (on field or centrally)



- CCMS System for Capture the energy usage and other parameters at pre-determined interval and store data for 30 days
- Ability to connect with a communication device
- Ability to download data in field
- System protection against surges
- Ability to upgrade firmware on field using a communication device

Enclosure: -

- **Enclosure should be made of fire-retardant FRS/ SMC material and with impact resistance of IK 10& IP 65.**
- Dimensions of the enclosure box should be such as there should be adequate space to access components of the box for R & M purpose. The vendor must also ensure at least 20% space is left in the box for future up-gradation/ devices to be added.
- The enclosure box must have a standard lock which cannot be opened by all kinds of commonly available tools.
- SMC shall be providing the design and size/specification of sticker including the logo after the award of work. For placement of sticker, an area of 9" x 7" should be available on the front of the box.
- Wiring inside the enclosure box should be done neatly with proper use connectors & numbering with use of Ferrule PVC Tube.

Communication Module: -

- Ability to communicate securely with via cellular networks (GSM / GPRS) and/ or RF networks
- Communication technology between CCMS unit and central server should be 2G/3G/4G hardware device which should be capable to run 2G/3G/4G as per availability in the site.
- Two-way communicator
- Ability to send data regarding energy usage, ON/OFF status etc. from controller
- Ability to give commands from a central level for switching ON/OFF scheduling etc.
- Ability to remotely upgrade the CCMS device firmware from central server

Software (At Control Room): -

- A web-based/ mobile based software package with a detailed information dashboard
- Ability to show the status of each controller on the dashboard.
- Ability to schedule and switch ON/OFF controllers remotely through the dashboard
- Reports in form of matrix as well as graphical representation
- Ability to provide overload indication.
- 10 Year software support should be at free of cost and communication charge for one year should be included.
- Server uptime should be minimum 95 % with disaster backup and sufficient storage capacity and processing power to ensure stable operation of CCMS throughout the contract period. Maintenance of the server and software is the responsibility of the vendor.

**Specifications: -**

Single phase (240 Volt P-N, Whole Current, Class 1.0) or a three phase system (Wires 3 * 240 Volts P-N, Whole Current, Class 1.0) electronic controller and energy controller compiled as per IS: 13779 & CBIP-88 with add on MCB.

Rating of the CCMS units for (including rating of safety equipment's - MCB, Relay, etc.) should be 6 kW (Single Phase).

Controller should also be compatible for remote communication using GPRS/GSM modem for operations like controller data downloading, & relay ON-OFF for maintenance purpose. Controller should records events like supply ON-OFF and relay ON-OFF for analysis etc.

The controller should be type tested in a NABL certified Lab The controller should be interfaced with a communication module which would wirelessly transmit data recorded to a dedicated server or on cloud-based architecture. The communication module also relays commands to schedule and control the cluster of street lights.

Street Light Controller: -**Rated Electrical Parameter**

- | | |
|----------------------|---|
| 1. Connection type | System for Single Phase/Three Phase Switching points |
| 2. Voltage | 240 volts P-N (+20% to -40% Vref) on each phase |
| 3. Current | 05 - 63 A for each phase (Withstands 120% I _{max}), Starting current- 0.2% I _b |
| 4. Frequency | 50 Hz \pm 5% (47.5 to 52.5) Hz |
| 5. Power Factor | Zero (lag)- Unity-Zero (Lead) |
| 6. Accuracy | 1.0 |
| 7. Withstand Voltage | 440 V up-to 5 minutes between Phase – Phase |

Functional Specifications**Input / Output**

1. Data the CCMS unit should be able to capture (record) and provide following parameters at variable time-intervals
 - Cumulative Active Energy
 - Average Power Factor
 - Power on hours
 - Monthly Load on/off

Controller should have the provision to store last 30 days data at one-hour interval. All these data are accessible for reading, recording by downloading through HHT (Hand Held Unit) through optical port or USB/Bluetooth given on controller front or from website/ web application. For HHT, a smartphone-based solution for collecting/ accessing data is also acceptable.
2. RTC the controller should have a built-in calendar & clock, having an accuracy of +/- 1 minute per year or better, however meter may confirm to accuracy as per IS 13779. A



separate internal Lithium battery back-up should be provided for continuous operation of controller RTC for at least two years under controller un-powered conditions.

3. Tamperers Following tamperers are logged with occurrence and restoration in FIFO manner:

- Ø Low Load
- Ø Over load
- Ø Under voltage
- Ø Over voltage

4. Astronomical Calendar for switching operation

Based on latitude and longitude of the installation place controller itself decides switch on –off timings.

5. Maintenance Mode of switching

In case of emergency it should be manually ON/OFF and in case of maintenance it can be ON/OFF from Website after login.

6. Switch on –off operation events

- Ø Switching events with the following reasons will be logged:
- Ø 4 Timed operation- As per astronomical calendar
- Ø 5 Unscheduled operation – In maintenance mode
- Ø 6 Event based like on over current, overload switching

7. Power on-off events

Last 20 power on-off events with power off duration will be logged.

8. Separate Energy Consumption registration for unscheduled switch on period

Last 20 events of maintenance mode with snap of energy register and date/time is logged in meter. In BCS, with these events, duration of these events and energy consumption during that period is also shown.

9. Switching on Overload/ Over current

Controller will continue monitor over current & overload condition against the threshold defined in controller and if condition persist for predefined time period (default 5 minutes) then disconnection of switch will be occurred. However, if required this feature should be bypassed.

10. LED Flashing Indication LED is provided on controller front.

11. Communication

Controller stored data can be downloaded through its optical port or USB using HHT (Hand held Unit) or directly by Laptop using Base computer software or can be downloaded from website.

Controller should be able to interface with the communication module through a serial port

12. Surge Protection

Standard CAT B 6000 V protection (IEC 61000-4-5)



13. Programmable Scheduling

The schedule for light operations can be programmed on field or during installation overriding the astronomical-clock.

14. Operating temperature 0° C to 70° C
15. Storage temperature -20° C to 80° C
17. Humidity 95% non-condensing

Constructional specifications

- 1 Controller sealing as per IS 13779 and CEA Metering Regulation 2006
- 2 Guarantee 1 year
- 3 Insulation Withstand an insulation test of 4 KV and impulse test at 6 KV
- 4 Resistance of heat and fire the terminal block and Controller case have safety against the spread of fire. They will not be ignited by thermal overload of live parts in contact with them as per the relevant IS 13779.

Contactor: Contactor confirming to relevant IEC/IS Standard

Polycarbonate Box – Enclosure: Enclosure should be made of fire-retardant FRS/ SMC material and with impact resistance of IK10.

- Ø Dimensions of the enclosure box should be such as there should be adequate space to access components of the box for R&M purpose. The vendor must also ensure at least 20% space is left in the box for future up-gradation/devices to be added.
- Ø The enclosure box must have a standard lock which cannot be opened by commonly available tools
- Ø SMC shall be providing the design and size/specification of sticker including the logo after the award of work. For placement of sticker, an area of 9"X7" should be available on the front of the box.
- Ø Wiring inside the enclosure box should be done neatly with proper use connectors & numbering with use of Ferrule PVC Tube.
- Ø The enclosure should have theft control mechanism and generate alerts when opened or if the unit experiences motion of any kind beyond a configured threshold
- Ø Providing and making cable end termination using Bakelite sheet with heavy duty stud type connector and solderless crimping lugs for feeder pillar, if applicable.

MCB

Should conform to IEC 62053/ 62054

Conforms to IS/IEC 60898 and IEC 60947 -2

- Ø Breaking capacity of 10kA throughout the range
- Ø MCB along with design for protection & auto-recovery/ self-healing is accepted.



Controller (Communication Module)/Feature Details

1. Power Supply	240 V AC
2. Mobile / Communication Network	GSM/ GPRS: Quad band 850/900/1800/1900 MHz
3. Communication Method	TCP – IP/http via GPRS / 3G and/ or RF SMS
5. Status of Sim	Based on LED on the module

Features:

- Ø Remote ON/ OFF in case bad weather, maintenance or emergency
- Ø Remote RTC Synchronisation of Street Light Controller
- Ø Communication should be encrypted by 128-bit encryption or adequate security protocol should be incorporated.
- Ø Alert message in pre-defined abnormal system conditions through SMS (5 numbers) and mobile/web-based application through GSM/GPRS/RF for:
 - Phase-wise currents on crossing threshold values*
 - Phase-wise voltages on crossing threshold values*
 - MCB trips
 - Theft alerts
 - Group failure of lights
 - No output supply

Web based software provided by the bidder must be compatible with SMAC centre CCMS monitoring software and it should support features given in SMAC Centre CCMS Monitoring Software.

Following are the key feature of our SMAC Centre CCMS Monitoring Software: -

- Ø The Main page of software shows real-time information about the cumulative load, number of faulty lights, total number of lights on/off (uptime %), number of approx. faulty lights, number of faulty switching points.
- Ø A separate tab in the software to show the list of CCMS units installed in the project area along with the meter parameters being showcased against each CCMS Unit.
- Ø Alert in case of fault – describing the fault.
- Ø A separate tab in the software to show the switch point summary which showcases the meter parameters, active alerts, link to the map page, etc.
- Ø A separate tab in the software for - monitoring & controlling, Alerts, Maps, Configuration page, Reports – uptime, history, energy savings, power failure, operational hour.
- Ø It should be able to display the power failure details of a particular switching point.
- Ø It should register all fault conditions like excess voltage/ current drawn, no-power supply, etc. through the instantaneous alert messages sent by the CCMS unit.
- Ø It can generate MIS reports in Matrix as well as in Graphical format based on Power supply status, Energy Consumption, Over/ Under Voltage/ Load, System parameter/ controllers i.e. Voltage, Current, Power factor, Cumulative KWH/ KVAH for individual switching points.



- Ø Different user authorization levels should be settable and the central server should be capable of handling high traffic.
- Ø GIS Mapping should be done covering all switching points and the details of each switch point shall be viewable in the web application software through a Google-map interface or web based digital map.
- Ø All the CCMS units should be remotely configured from the Central Control Unit:
 - Setting new ON/OFF timings
 - Setting the RTC time of Automation unit
 - Knowing the current status of any particular switching point.
 - Reset the unit.
 - The minimum interval for the update of data should be 15 minutes but in case of any event it should send immediately.
- Ø Auto synchronization of controller with server timing to be further synchronized with standard GPS/Network clock timing.
- Ø Further, system can indicate various faults as below: -
 - Failure of lights (by association to a drop-in power consumption against a set benchmark)
 - Status of the incoming supply (power failure)
 - High /low voltage
 - Overload on the phases
- Ø Ability to remotely upgrade the CCMS device firmware from central server.

Bill of Quantity:

Any other item/ material/ equipment/ system as may be required to be supplied for completing the work and successful commissioning under this contract in all respects in accordance with the provisions of the contract and/or to ensure the safety of installation during and after execution should be carried out by successful vendor at 'No extra to SMC'.

Following is list of materials (but not limited to) to be included in the streetlight controller for configuration - 1. Bidder shall use required material per unit to ensure the entire specifications as given in the tender document are met.

- (1) IP 65 or better enclosure box with min. IK-10 impact resistance
- (2) Class 1.0 accuracy Energy Meter with IS-13779
- (3) Controller Module (GSM/GPRS Module, Microcontroller and Power Supply)
- (4) Contactor
- (5) Door Tamper Switch
- (6) MCB (for Bypass facility): 2 Pole, 32 A
- (7) MCB (out going from CCMS): 2 Pole, 32 A
- (8) Neutral Link: 1 No. of 32 A with copper connector strip of 25 x 3 mm size



(9) Copper wiring should be used for connections with 6 mm² size wires.

(10) ELCB (out going from Energy meter): 2 Pole, 32 A

1. **Warranty of the product will be min. 1 year from the date of commissioning.**
2. The feature proposed for CCMS is indicative. However, bidders are free to offer their lighting control technology which should encompass all key features as above. But, the same time, software must have open source code, compatible with all relevant software(s) are in use by SMC. It means control, supervision; data acquisition must be possible with the software to be provided.
3. Offered brand has a dedicated telephone number/ Toll Free Number to lodge a complaint by PROJECT AREA Officials/ Public in respect of system problems.
4. For comprehensive on-site Warranty and Maintenance for 1 year: Successful bidder shall ensure 97% service level through CCMS Unit at any point of time during the contract period of 1 year. In case of failure of CCMS Unit which is brought to the notice of successful bidder (by mail, letter etc.). The same has to be replaced within 48 hours of intimation. If vendor fails to correct the fault within 48 hours, the penalty starts with first penalty being levied on completion of 72 hours from logging of complaint. Penalty rate @ Rs. 100 per day per light connected to the CCMS unit shall be imposed and the amount shall be deducted from the vendor payment.
5. Ceiling limit of 10% on penalty shall be set, over and above the LD Limit of 10%. SMC is at Liberty to carry out Third Party Inspection at any time during the contract period.

BYPASS FACILITY: -

In case of mal-functioning or non-functioning of the CCMS, streetlight operation can be done manually without any additional installation a 2 Poles MCB having 32 A capacity will be provided. The MCB should be connected with outgoing wires from energy meter and outgoing MCB of CCMS.

Detailed Specifications of Various Components are as under:

⇒ **Detailed specifications for MCB/ ELCB:**

- Ø Characteristic - B
- Ø Breaking Capacity – as per relevant IS/ International Standard
- Ø Rated voltage - 240/ 415 V (as applicable)
- Ø Frequency - 45 to 60 Hz, Rated operating voltage – 240 V
- Ø Fixing - Snap fixing on standard DIN rail profile EN 50 023 - 35 x 7.5

⇒ **Detailed specifications for ELCB: -**

Earth Leakage Circuit Breaker confirming to IS- 12640/ 1988 & BS 4293/ 1983 with latest amendment(s) having sensitivity 100 mA and breaking capacity of 16 kA and suitable for 1 Ø & 3 Ø, 4 pole having characteristic of quick acting & tripping with all advance feature with suitable enclosure box/ mounting rail.



⇒ **Detailed specifications for earthing of Feeder Pillar: -**

The pipe type earthing having 1.5 m long and 2.5 cm ϕ Galvanised iron pipe with coupling and buried in specially prepared earth pit complete with necessary 25 x 3 mm Size GI earthing strip with coupling and GI plug for earthing of switch gear as directed by Engineer-in-charge. This item includes supply, erection, testing and commissioning. The earthing must be as per IS 3043 (1987) with latest amendment(s), if any.

Since the technology is updating every day and hence, the intention behind the installation of CCMS unit mentioned in first paragraph is important and if any deviation in offered CCMS unit is there it should be brought in notice and these deviations can be accepted if they are fulfilling the intentions of the installation of CCMS Unit for streetlight application.

Installation

The CCMS unit shall be installed on suitable fabricated stand made from GI.Reinforced Cement Concrete (RCC) foundation having Grade M20 along with necessary Foundation Bolt, Nuts, Washers with anchor plate and DWC pipe for cable access etc. shall be casted having required size as proposed by manufacturer of CCMS unit with necessary plastering. Foundation should be made in such a way as site requirement. This section should be finished in decorative manner as directed by Engineer-in-charge. The item includes excavation, necessary reinforcement recommended by manufacturing co, Shuttering and M20 grade CC from preferably RMC plant or mixture of 1:1.5:3 M20 grade CC. The Contractor should make necessary arrangement for curing required for the works at his own cost. The site should be cleaned or excess material should be removed after the work is completed. While making foundation, best civil engineering practice(s) must be exercised. Bidder must take approval of foundation drawing before carrying out the work.

Cable end termination: -

The item includes supply, erection, testing and commissioning of end termination at the integral junction boxes or wherever required. The items includes supply of nickel-plated single compression cable gland and solder less crimping Aluminium lugs suitable for cable. The gland should be fixed and cable shall be terminated at connector in terminal box or wherever required using ISI Marked PVC 1.1 kV grade insulating tape roll with appropriate colour code.

DWC pipe including excavation & backfilling:

(i) Soft Soil/ Kachcha Road

(ii) Hard Murrum/ Asphalt Road

Supply & laying of 50/63 mm OD and 38/50 mm ID Double Walled Corrugated (DWC) Pipe with necessary socket/ coupling confirming to IS 14930 part-II with necessary connecting accessories of same material for laying/ passing of cable through DWC pipe. The rate should include excavation of ground/tar road and refilling of trench having depth of 75 cm or as per site requirement. DWC pipe must be laid first. Cable drawing work must be carried out after completion of backfilling.

Any damage to any of the services during excavation & refilling shall be to the contractor's account. The work shall be carried out to the satisfaction of Engineer- in-charge. Refilling work of the trench should be carried out after final supervision of the representative of the



corporation. After completion of DWC pipe laying, trench should be refilled and ground should be levelled including watering etc. The site should be cleaned of excess material/debris after the work is completed, without any extra cost.

(iii) Making Zari & Refilling by similar material:

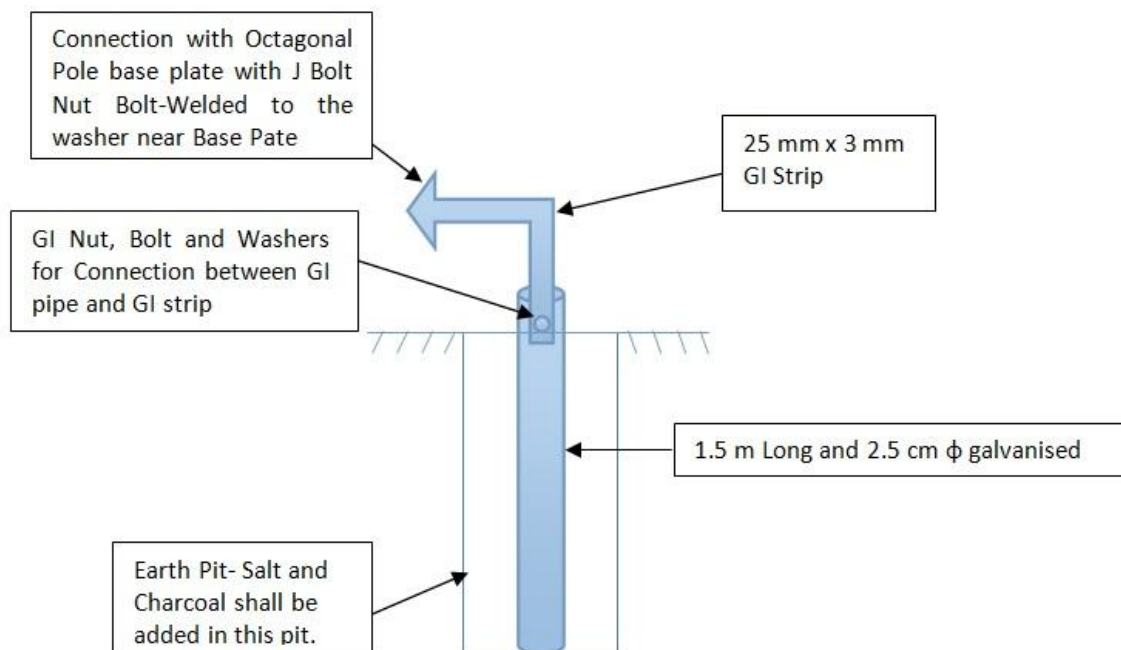
If the cable is to be laid for road crossing on Hard murrum/ Asphalt road the same shall be laid by making 6" to 8" deep zari & refilling must be done with similar material after cable laying. After completion of work road should be levelled including watering. The site should be cleaned of excess material/debris after the work is completed, without any extra cost.

Painting the Number of Pole: -

Painting the number and words for (streetlight pole numbering and back ground of colour as per Zone Code) inventory Identification on erected fittings/ equipment's or such accessories as may be required with good quality of enamelled paint up to 20 characters, up to 75 mm Height. (The height of numbering is 2,000 mm from base plate.) In case of poles used in central verge, pole number should be painted on both sides so that it can be visible on the either side. (The height of numbering is 1,500 mm from base plate.)

Earthing of Pole: -

Pipe type Earthing having 1.5 m long, 2.5 cm ϕ , 2.65 mm thick (min.) galvanised iron pipe with coupling and buch buried in specially prepared earth pit. Pipe must be welded with GI strip at top for proper connection with necessary 25 x 3 mm size GI earthing strip using nut and bolt with washers. Salt and charcoal/ coke must be added as required for pipe type earthing. Earthing pipe will be connected to pole by GI earthing strip through necessary GI nut-bolt & washers. GI welding of strip/ bolt with pole's face should be done for durable earthing. Earthing Drawing is attached herewith for reference; however, final decision of engineer in charge must be binding to the contractor regarding construction of earthing.





Earthing Drawing

32/ 40 mm dia., GI "B" class pipe:-

The item includes Supply & laying of GI "B" grade pipe (ISI Marked) for laying/ passing of cable through GI pipe. Any damage to any of the services during excavation & refilling shall be to the contractor's account. The work shall be carried out to the satisfaction of Engineer- in-charge. Refilling work of the trench should be carried out after final supervision of the representative of the corporation. After completion of GI pipe laying, trench should be refilled and ground should be levelled including watering etc. The site should be cleaned of excess material/debris after the work is completed, without any extra cost. Bending of the pipe should be used done when it is used as a guard pipe.

Single pole MCB: -

1 A (≤ 90 W LED luminaires)/ 2 A (> 90 to 280 W LED luminaires) SP MCB('C' Curve) with breaking capacity of 10 kA and Confirming to IS/IEC 60898-1 and IEC 60947-2, for each fitting, shall be mounted on existing DIN rail channel provided at junction box of the pole. If, a particular light fitting has to be manually operated the same can be done by this MCB provided on terminal plate.

Description	Specification
Current Rating	up to 2 A
Tripping Characteristic	B/C Curve
Breaking Capacity	IS/IEC 60898-1 and IEC 60947-2
Rated Voltage	240
Frequency	50 to 60 Hz
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	500 V
Minimum Operating Voltage	24 V AC
Degree of Protection	IP 20
Operating Temperature	- 25° C to + 70° C
Termination Capacity	2.5 Sq.mm. Cu flexible
Mechanical Life (operating cycles)	>100,000
Electrical Life (operating cycles)	20,000
Mounting Position	Horizontal/Vertical/Flat
Mounting	Snap fixing on standard profile 35 X 7.5mm DIN-Rail as per EN 50022

F.R.P. JUNCTION BOX: -

SETC of SMC press moulded composite FRP (Plastic) loop- in, loop-out, dust & water proof, junction box, minimum 2 mm thick, with doors hinged on top side (open able from bottom to top) having locking arrangements, with 25 mm x 3 mm size GI mounting clamp with nuts, bolts & washers suitable for erection on pole/ wall with cable clamps & earth bolt.

The box should have provision for 2 Nos. (or 3 Nos. if required) cable entries suitable for size of the cable. The min. size of the box should be 300 mm X 200 mm X 105 mm. The box should be so designed to prevent ingress of foreign material including rainwater.

Side opening with three nos. of locks (steel pins/ bolt) can also be permitted.

The box should accommodate the following: -



4 Nos. panel type, 63 A, 500 V, Porcelain/ Heavy duty FRP/ DMC connectors or strip erected on suitable wooden plank with necessary termination arrangement. All Nut Bolts/fasteners/ terminals must be of anti-corrosive material only.

A danger notice caution sticker should be fixed on the Junction box. Each box should be complete with earthing strip for cable (armoured) termination and earthing bolts for the same.

GI wire: - (for Bridge Work)

The item includes SITC of 8 SWG GI wire for earthing of pole. The GI wire should be laid in DWC pipe with cable and fitted with bolt welded in inner portion of the base of pole. The GI wire should be carried up to the feeder pillar parallel with the cable and should be connected with the earthing of feeder pillar.

I/C. Executive Engineer (Ele),
Light & EEC,
Surat Municipal Corporation.

I / We have gone through the fact(s) as above and, have clear understanding regarding the Detail Technical Specification as described.

SEAL & SIGNATURE OF THE TENDERER: -



GENERAL SPECIFICATION FOR ELECTRICAL INSTALLATION: -

WIRING RULES:

The installation should be carried in conformity with the Indian Electricity Act/ Rules and the latest edition of the wiring rules of the Institution of Electrical Engineers (London) but where this specification differs from those rules the specifications shall be followed.

DEFINITION:

The definitions of terms in the IEC wiring rules shall apply.

SUPPLY PRESSURE AND FREQUENCY:

The supply will be three phases, 50 cycles/ second AC, 4 wire system, 415 V between phase and 230/ 240 V between phase and neutral and apparatus required shall be suitable for this supply.

GENERAL TEST FOR INSTALLATION:

The installation with fittings complete shall satisfactorily pass the following tests, before the current is switched on: -

"All the lamps and appliance having been connected to the conductors and all switches and fuses be ON. A pressure not less than twice the working pressure (subject to a limit of 500 volts) shall be applied and the insulation resistance of the whole or any part of the installation to earth must not be less in MΩ than 25 divided by the number of points, subject to Min. of 1.5 MΩ."

SUPERVISION: -

The whole of the work shall be carried out to the satisfaction of the Engineer in charge and under the constant supervision of the contractor's competent qualified and experienced supervisor/ engineer. The contractor shall if required by the department, furnish the full details of the supervisor's/ engineer's qualification. Only permit holder persons should be allowed to work at the site.

I/C. Executive Engineer (Ele),
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -



VENDOR'S LIST

Sr. No.	Equipment/ Accessories	Make
(1)	LED Chip	Cree/ Osram/ Nichia/ Philips Lumileds
(2)	Armoured/ Un armoured Cable	UNISTAR, Gloster, CCI, Incab, Torrent, FINOLEX, Bharat Cab, Havells, Avocab, KEI, RR Kabel
(3)	ELCB/ MCB/ Distribution Board	Standard, Indokupp, MDS, Havells, Hager, Schneider, Siemens, ABB, L & T, Bentec, C&S
(4)	Time Switches	L & T, MDS, Theaben, Siemens, Prottime, Schneider, Legrand
(5)	Contactor	L&T, Siemens, Havells, Schneider, ABB, GE.
(6)	Conical/ Octagonal Pole	Bajaj, Transrail, Valmont, Utkarsh, Aster
(7)	GI Pipe Pole/ Guard Pipe	Tata, Asian, CTC, Jindal, Apollo, Zenith, Ambica, GST
(8)	DWC Pipe	Rex, Gemini, Duraline, SY-ARON (VARAHI POLYMERS)
(9)	Junction Box	Sintex, Everest, ESCO, National, EPP, Welltech

Note: For unit rate works, makes other than above which are approved time to time by Street light & EEC department can be used with prior approval of the competent authority of the corporation.

I/C. Executive Engineer (Ele),
Light & EEC,
Surat Municipal Corporation.

SEAL & SIGNATURE OF THE TENDERER: -