

Godavari Gas Private Limited

A Joint Venture of Andhra Pradesh Gas Distribution Corporation Ltd. and Hindustan Petroleum Corporation Ltd

OPEN DOMESTIC COMPETITIVE BIDDING

BID DOCUMENT FOR

HIRING OF CONTRACT FOR CIVIL AND ELECTRICAL WORKS FOR CGS FACILITY AT BHIMADOLE

OPEN DOMESTIC COMPETITIVE BIDDING

(Tender No.: GGPL/C&P/SR 1000013/2022-23/07 Dt.16.03.2023)

DATE & TIME FOR PRE-BID MEETING: 23.03.2023 at 1500 Hrs. (IST)

DUE DATE & TIME FOR

BID SUBMISSION : 31.03.2023 at 1400 Hrs. (IST)

DUE DATE & TIME FOR BID OPENING : 31.03.2023 at 1500 Hrs. (IST)

E-mail: <u>rkpotla@gail.co.in/jayasree.d@apgdc.com</u>

Website: www.godavarigas.in



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SECTION-I INVITATION FOR BID (IFB)



"INVITATION FOR BID (IFB)"

SECTION-I

Ref No: Tender No.: GGPL/C&P/SR 1000013/2022-23/07 Dt. 16.03.2023

To,

PROSPECTIVE BIDDERS

SUB: HIRING OF CONTRACT FOR CIVIL AND ELECTRICAL WORKS FOR CGS FACILITY AT BHIMADOLE.

Dear Sir/Madam,

- 1.0 GGPL invites bids from bidders for the subject job/works, in complete accordance with the following details and enclosed Tender Documents.
- 2.0 The brief details of the tender are as under:

[A]	BRIEF SCOPE OF	HIRING OF CONTRACT FOR CIVIL AND
	SERVICE/JOB	ELECTRICAL WORKS FOR CGS FACILITY
		AT BHIMADOLE
[B]	TENDER NO. & DATE	GGPL/C&P/SR 1000013/2022-23/07 Dt. 16.03.2023
[C]	TYPE OF BIDDING	
	SYSTEM	TWO BID SYSTEM
[D]	TYPE OF TENDER	OPEN DOMESTIC MANUAL TENDER.
		Hard copy/ PHYSICALLY to be submitted.
[E]	CONTRACT PERIOD	1 Year from date of FOA/LOA whichever is earlier
		As per Clause no. 2.12 of SCC
[F]	BID SECURITY / EARNEST	APPLICABLE Amount Rs. 33,000/-
	MONEY DEPOSIT (EMD)	
[G]		From 16.03.2023 (17.00 Hrs, IST) to 31.03.2023
		(14:00 Hrs, IST) on following websites:
	AVAILABILITY OF TENDER	
	DOCUMENT ON WEBSITE(S)	(i) GGPL's Tender Website –
		http://www.godavarigas.in
[H]	DATE, TIME & VENUE OF	At 15 00 hrs.(IST) on 23.03.2023
[]	PRE BID MEETING	101 & 102, 1st Floor, Ocean Park, Beach Road,
		Maharanipeta
		City: Visakhapatnam, Andhra Pradesh.
		ZIP Code: 530002
		Country: India
[I]	DUE DATE & TIME OF	Up to 1400 hrs. (IST) on 31.03.2023
	BIDSUBMISSION	
[J]	DATE AND TIME OF	Date & time: 31.03.2023 .At 15:00 hrs. (IST)
	UNPRICED BID OPENING	



[K]	CONTACT DETAILS OF	Name : RK Potla
	TENDER DEALING	Designation: DGM (BD, HR & C&P)
	OFFICER	Phone No. & Extn: 8688775401
		E-mail: rkpotla@gail.co.in/
		jayasree.d@apgdc.com;

In case of the days specified above happens to be a holiday in GGPL, the next working day shall be implied.

- 3.0 Bids must be submitted strictly in accordance with Clause No. 11 of ITB depending upon Type of Tender as mentioned at Clause no. 2.0 (D) of IFB. The IFB is an integral and inseparable part of the bidding document.
- 4.0 In case of e tendering, the following documents in addition to uploading in the bid on GGPL'S e-tendering website shall also be submitted in Original (in physical form) within 7 (seven) days from the bid due date provided the scanned copies of the same have been uploaded in e-tender by the bidder along with e-bid within the due date and time to the address mentioned in Bid Data Sheet(BDS):
 - i) EMD/Bid Security / Declaration for Bid Security
 - ii) Power of Attorney
 - iii) Integrity Pact
- 5.0 In case of Manual Bids, bids complete in all respect should reach at the address specified in Bid Data Sheet on or before the due date & time. Bids received after the due date and time is liable to be rejected.
- 6.0 Bidder(s) are advised to quote strictly as per terms and conditions of the tender documents and not to stipulate any deviations/exceptions.
- 7.0 Any bidder, who meets the Bid Evaluation Criteria (BEC) and wishes to quote against this tender, may download the complete bidding document along with its amendment(s) if any from GGPL's website (http://www.godavarigas.in); and submit their Bid complete in all respect as per terms & conditions of Tender Document on or before the Due date of bid submission.
- 8.0 Bid(s) received from bidders to whom tender/information regarding this Tender Document has been issued as well as offers received from the bidder(s) by downloading Tender Document from above mentioned website(s) shall be taken into consideration for evaluation & award provided that the Bidder is found responsive subject to provisions contained in Clause No. 2 of ITB.
 - The Tender Document calls for offers on single point "Sole Bidder" responsibility basis (except where JV/Consortium bid is allowed pursuant to clause no. 3.0 of ITB) and in total compliance of Scope of Works as specified in Tender Document.
- 9.0 Any revision, clarification, corrigendum, time extension, etc. to this Tender Document will be hosted on the above mentioned website(s) only. Bidders are requested to visit the website regularly to keep themselves updated.
- 10.0 All the bidders including those who are not willing to submit their bid are required to submit F-11 (Acknowledgement cum Consent letter) duly filled within 7 days from receipt of tender information.



11.0 GGPL reserves the right to reject any or all the bids received at its discretion without assigning any reason whatsoever.

This is not an Order.

For & on behalf of Godavari Gas Private Limited

(Authorized Signatory) Name : RK Potla

Designation: DGM (BD, HR & C&P)

E-mail ID : <u>rkpotla@gail.co.in</u>

Contact No.: 8688775401



DO NOT OPEN - THIS IS A QUOTATION





SECTION-II

BID EVALUATION CRITERIA & EVALUATION METHODOLOGY



BID EVALUATION CRITERIA (BEC)

1.0 TECHNICALCRITERIA:

Bidder should meet following technical BEC criteria given under:

 The bidder must have executed a Construction Work contract of Commercial / Residential Building involving Civil, Structural, Electrical Works and Mechanical Works in One Single Work Order of minimum value of Rs. 2.5 Lakhs in previous 7 years' period reckoned from the date of final bid due date.

Note:

- i) In case, bidder is executing a contract of above nature which is still running and the contract value executed till one day prior to the due date of submission of bid is equal to or more than the minimum prescribed value as mentioned above, such experience will also be taken into consideration provided that the bidder has submitted satisfactory work execution certificate to this effect issued by the end user / owner / client. For this also the minimum executed value in a single contract criteria will be as prescribed above.
- ii) A Job completed by a bidder for its own plant/projects cannot be considered as experience for the purpose of meeting BEC of the tender. However, jobs completed for Subsidiary/Fellow subsidiary / Holding company will be considered as experience for the purpose of meeting BEC subject to submission of tax paid invoice (s) duly certified by Statutory Auditor of the bidder towards payments of statutory tax in support of the job completed for Subsidiary/Fellow subsidiary/ Holding company. Such bidders to submit these documents in addition to the documents specified to meet BEC

DOCUMENTS TO BE SUBMITTED FOR COMPILANCE OF TECHNICAL BEC:

In support of the above, Bidder should submit Documentary proof in the form of copy of Work Order / Agreement / and Completion / Execution certificate mentioning required details. Work Order / Agreement must clearly indicate nature of Work / Service, various components / items, period, and value. Similarly, Completion Certificate / Execution Certificate must clearly indicate reference to relevant work, actual value of executed work and actual date of completion.

2.0.1 FINANCIAL CRITERIA:

Not Applicable



Note:

1. Only documents (Work Order, Completion certificate, Execution Certificate etc.) which have been referred/ specified in the bid shall be considered in reply to queries during evaluation of Bids.

After submission of bid, only related shortfall documents will be asked for in TQ/CQ and considered for evaluation. For example, if the bidder has submitted a contract without its completion/ performance certificate, the certificate will be asked for and considered. However, no new reference/ PO/WO/LOA is to be submitted by bidder in response to TQ/CQ so as to qualify and such documents will not be considered by GGPL for evaluation of Bid.

Experience of bidder acquired as a subcontractor can be accepted against submission of certificate from end user by such bidder along with other specified documents.

2.1 RELAXATION OF PRIOR EXPERIENCE & TURNOVER CRITERIA NORMS FOR STARTUP: Not Applicable

2.2 EVALUATION AND COMPARISON OF BIDS:

- i) Bidders are required to quote for complete scope of services. If any bidder quotes for part scope/quantity, their bid shall be considered incomplete and shall not be evaluated, stands rejected.
- ii) Price Bids shall be evaluated on overall lowest basis for complete scope of services.
- iii) In case of tie between bidders, job shall be awarded to bidder having higher Turnover in the preceding financial year.





SECTION-III

INSTRUCTION TO BIDDERS (TO BE READ IN CONJUNCTION WITH BIDDING DATA SHEET (BDS)



SECTION-III INSTRUCTION TO BIDDERS

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INSTRUCTIONS TO BIDDERS [ITB] (TO BE READ IN CONJUNCTION WITH BIDDING DATA SHEET (BDS)

[A] GENERAL

1 SCOPE OF BID

- 1.1 The Employer/ Owner/ GGPL as defined in the "General Conditions of Contract [GCC]", wishes to receive Bids as described in the Bidding Document/Tender document issued by Employer/Owner/GGPL.
- 1.2 SCOPE OF BID: The scope of work/ Services shall be as defined in the Bidding documents.
- 1.3 The successful bidder will be expected to complete the scope of Bid within the period stated in Special Conditions of Contract.
- 1.4 Throughout the Bidding Documents, the terms 'Bid', 'Tender'& 'Offer' and their derivatives [Bidder/Tenderer, Bid/Tender/Offer etc.] are synonymous. Further, 'Day' means 'Calendar Day' and 'Singular' also means 'Plural'.

2 **ELIGIBLE BIDDERS**

- 2.1 The Bidder shall not be under a declaration of ineligibility by Employer for Corrupt/Fraudulent/Collusive/Coercive practices, as defined in "Instructions to Bidders [ITB], Clause No. 39" (Action in case Corrupt/Fraudulent/Collusive/Coercive Practices).
- 2.2 The Bidder is not put on 'Holiday' by GAIL/GGPL or Public Sector Project Management Consultant (like EIL, MECON only due to "poor performance" or "corrupt and fraudulent practices") or banned/blacklisted by Government department/ Public Sector on due date of submission of bid. Further, neither bidder nor their allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of GGPL or the Ministry of Petroleum and Natural Gas.

If the bidding documents were issued inadvertently/ downloaded from website, offers submitted by such bidders shall not be considered for opening/evaluation/Award and will be returned immediately to such bidders.

In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to GGPL by the bidder.

It shall be the sole responsibility of the bidder to inform about their status regarding para 1 of clause 2.2 herein above on due date of submission of bid and during the course of finalization of the tender. Concealment of the facts shall tantamount to



misrepresentation of facts and shall lead to action against such Bidders as per clause 39 of ITB.

2.3 The Bidder should not be under any liquidation court receivership or similar proceedings on due date of submission of bid.

In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to GGPL by the bidder.

It shall be the sole responsibility of the bidder to inform GGPL in case the bidder is under any liquidation court receivership or similar proceedings on due date of submission of bid and during the course of finalization of the tender. Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause no.39 of ITB.

- 2.4 Bidder shall not be affiliated with a firm or entity:
- (i) that has provided consulting services related to the work to the Employer during the preparatory stages of the work or of the project of which the works/services forms a part of or
- (ii) that has been hired (proposed to be hired) by the Employer as an Engineer/Consultant for the contract.
- 2.5 Neither the firm/entity appointed as the Project Management Consultant (PMC) for a contract nor its affiliates/ JV'S/ Subsidiaries shall be allowed to participate in the tendering process unless it is the sole Licensor/Licensor nominated agent/ vendor.
- 2.6 Pursuant to qualification criteria set forth in the bidding document, the Bidder shall furnish all necessary supporting documentary evidence to establish Bidder's claim of meeting qualification criteria.

2.7 Power of Attorney:

Power of Attorney (POA) to be issued by the bidder in favour of the authorized employee(s), in respect of the particular tender, for purpose of signing the documents including bid, all subsequent communications, agreements, documents etc. pertaining to the tender and act and take any and all decision on behalf of the bidder (including Consortium). Any consequence resulting due to such signing shall be binding on the Bidder (including Consortium).

The Power of Attorney shall be issued as per the constitution of the bidder as below:

- a) **In case of Proprietorship:** by Proprietor
- b) **In case of Partnership:** by all Partners or Managing Partner
- c) In case of Limited Liability Partnership: by any bidder's employee authorized in terms of Deed of LLP
- d) In case of Public / Limited Company: PoA in favour of authorized employee(s) by Board of Directors through Board Resolution or by the



designated officer authorized by Board to do so. Such Board Resolution should be duly countersigned by Company Secretary / MD / CMD / CEO.

The Power of Attorney should be valid till award of contract / order to successful bidder.

2.8 In case of change of constitution of bidder after submission of bid, the same shall be informed by the bidder to GGPL promptly. Failure to same shall be considered as misrepresentation by the bidder.

3 BIDS FROM "JOINT VENTURE"/"CONSORTIUM" NOT ACCEPTABLE

4 ONE BID PER BIDDER

- 4.1 A Firm/Bidder shall submit only 'one [01] Bid' in the same Bidding Process. A Bidder who submits or participates in more than 'one [01] Bid' will cause all the proposals in which the Bidder has participated to be disqualified.
- 4.2 More than one bid means bid(s) by bidder(s) having same Proprietor / Partners / Limited Liability Partner in any other Bidder (s). Further, more than one bids shall also include two or more bidders having common power of attorney holder.
 - Failure to comply this clause during tendering process will disqualify all such bidders from process of evaluation of bids.
- 4.3 Alternative Bids shall not be considered.
- 4.4 The provisions mentioned at sl. no. 4.1 and 4.2 shall not be applicable wherein bidders are quoting for different Items / Sections / Parts / Groups/ SOR items of the same tender which specifies evaluation on Items / Sections / Parts / Groups/ SOR items basis

5 COST OF BIDDING & TENDER FEE

5.1 COST OF BIDDING

The Bidder shall bear all costs associated with the preparation and submission of the Bid including but not limited to Bank charges all courier charges including taxes & duties etc. incurred thereof. Further, GGPL will in no case, be responsible or liable for these costs, regardless of the outcome of the bidding process.

5.2 <u>TENDER FEE:</u> NOT APPLICABLE

5 SITE VISIT

- 6.1 The Bidder is advised to visit and examine the site of works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a Contract for the required job. The costs of visiting the site shall be borne by the Bidder.
- 6.2 The Bidder or any of its personnel or agents shall be granted permission by the



Employer to enter upon its premises and land for the purpose of such visits, but only upon the express conditions that the Bidder, its personnel and agents will release and indemnify the Employer and its personnel, agents from and against all liabilities in respect thereof, and will be responsible for death or injury, loss or damage to property, and any other loss, damage, costs, and expenses incurred as a result of inspection.

6.3 The Bidder shall not be entitled to hold any claim against GGPL for non-compliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the bid.

[B] BIDDING DOCUMENTS

7 <u>CONTENTS OF BIDDING DOCUMENTS</u>

7.1 The contents of Bidding Documents / Tender Documents are those stated below, and should be read in conjunction with any 'Addendum / Corrigendum' issued in accordance with "ITB: Clause-9":

Section-I : Invitation for Bid [IFB]

➤ Section-II : BID EVALUATION CRITERIA [BEC] &

Evaluation methodology

Section-III : Instructions to Bidders [ITB]

Annexure Forms & Format

Section-IV : General Conditions of Contract [GCC]
 Section-V : Special Conditions of Contract [SCC]

Section-VI : Specifications, Scope of Work and Drawing

Section-VII : Schedule of Rates

*Request for Quotation', wherever applicable, shall also form part of the Bidding Document.

7.2 The Bidder is expected to examine all instructions, forms, terms & conditions in the Bidding Documents. The "Request for Quotation [RFQ] &Invitation for Bid (IFB)" together with all its attachments thereto, shall be considered to be read, understood and accepted by the Bidders. Failure to furnish all information required by the Bidding Documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will be at Bidder's risk and may result in the rejection of his Bid.

8 CLARIFICATION OF BIDDING DOCUMENTS

8.1 A prospective Bidder requiring any clarification(s) of the Bidding Documents may notify GGPL in writing or by fax or email at GGPL's mailing address indicated in the BDS no later than 02 (two) days prior to pre-bid meeting (in cases where pre-bid meeting is scheduled) or 05 (five) days prior to the bid closing date in cases where pre-bid meeting is not held. GGPL reserves the right to ignore the bidders request for clarification if received after the aforesaid period. GGPL's may



respond in writing to the request for clarification. GGPL's response including an explanation of the query, but without identifying the source of the query will be uploaded on GGPL's web site [http://www.godavarigas.in] communicated to prospective bidders by e-mail/ fax.

8.2 Any clarification or information required by the Bidder but same not received by the Employer at clause 8.1 (refer BDS for address) above is liable to be considered as "no clarification / information required".

9 AMENDMENT OF BIDDING DOCUMENTS

- 9.1 At any time prior to the 'Bid Due Date', Owner may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by addenda/corrigendum.
- 9.2 Any addendum/ corrigendum thus issued shall be part of the Bidding Documents and may be hosted on GGPLs tendering website [http://www.godavarigas.in] communicated to prospective bidders by e-mail/ fax. Bidders have to take into account all such addendum/ corrigendum before submitting their bid.
- 9.3 The Employer, if consider necessary, may extend the date of submissions of Bid in order to allow the Bidders a reasonable time to furnish their most competitive bid taking into account the amendment issued thereof.

[C] PREPARATION OF BIDS

10 LANGUAGE OF BID:

The bid prepared by the bidder and all correspondence/drawings and documents relating to the bid exchanged by bidder and GGPL shall be written in English language alone. Any printed literature furnished by the bidder may be written in another language as long as accompanied by an ENGLISH translation duly authenticated by the chamber of commerce of bidder's country, in which case, for the purpose of interpretation of the bid, the ENGLISH translation shall govern.

In the event of submission of any document/certificate by the Bidder in a language other than English, the English translation of the same duly authenticated by Chamber of Commerce of Bidder's country shall be submitted by the Bidder.

11. <u>DOCUMENTS COMPRISING THE BID</u>

11.1 In case the Bids are invited under the Manual Two Bid system. The Bid prepared by the Bidder shall comprise the following components sealed in 2 different envelopes:

11.1.1 **ENVELOPE-I:** "TECHNO-COMMERCIAL/UN-PRICED BID" shall contain the following:

- a) 'Covering Letter' on Bidder's 'Letterhead' clearly specifying the enclosed contents.
- b) 'Bidder's General Information', as per 'Form F-1'.



- c) Copies of documents, as specified in tender document
- d) 'Letter of Authority' on the Letter Head, as per 'Form F-5'
- e) 'Agreed Terms and Conditions', as per 'Form F-10'
- f) 'ACKNOWLEDGEMENT CUM CONSENT LETTER', as per 'Form F-11'
- g) Duly attested documents in accordance with the "BID EVALUATION CRITERIA [BEC]" establishing the qualification.
- h) Copy of Power of Attorney /copy of Board Resolution, in favour of the authorized signatory of the Bid, as per clause no.2.7 of ITB
- i) EMD/Bid security (in Original) Declaration for Bid Security as per provision of ITB
- j) Copy of "Schedule of Rates (SOR)"<u>with prices blanked-out</u>, mentioning "QUOTED / NOT QUOTED" (as applicable) written against each item (As a confirmation that the prices are quoted in requisite format complying with the requirements)
- k) All documents in support of Technical Criteria and Financial Criteria of BEC, duly authenticated
- Complete Tender Document duly signed/ digitally signed by the Authorized Signatory
- m) Copies of documents defining constitution or legal status of firm (Proprietorship
 / Partnership / Limited Company, etc.), place of registration and principal place of business of the company
- n) All applicable formats F-1 to F-21 duly filled-up in all respects

Note:

- Few formats are to be submitted exclusively on letter head of company (clearly mentioned in respective format).
- Format F-16 is to be issued by Chartered Accountant on their letterhead (not on Letter-head of company of bidder)
- o) Any other documents (like EPF registration, GST registration certificate, PAN card, ESI Code No., etc.)
- p) If bidder falls under MSE category, relevant documents in support of MSE bidder to be submitted (duly attested by Chartered Accountant and Notarized by Notary Public)
- q) Any other document/information/details required as per Bidding Document

Note: All the pages of the Bid must be signed by the "Authorized Signatory" of the Bidder.

11.1.2 ENVELOPE-II: Price Bid

- i) The Prices are to be submitted strictly as per the Schedule of Rate of the bidding documents. GGPL shall not be responsible for any failure on the part of the bidder to follow the instructions.
- ii) Bidders are advised NOT to mention Rebate/Discount separately, either in the SOR format or anywhere else in the offer. In case Bidder(s) intend to offer any Rebate/Discount, they should include the same in the item rate(s) itself under the "Schedule of Rates (SOR)" and indicate the discounted unit rate(s) only.



- iii) If any unconditional rebate has been offered in the quoted rate the same shall be considered in arriving at evaluated price. However, no cognizance shall be taken for any conditional discount for the purpose of evaluation of the bids.
- iv) In case, it is observed that any of the bidder(s) has/have offered suo- moto Discount/Rebate after opening of un-priced bid but before opening of price bids such discount /rebate(s) shall not be considered for evaluation. However, in the event of the bidder emerging as the lowest evaluated bidder without considering the discount/rebate(s), then such discount/rebate(s) offered by the bidder shall be considered for Award of Work and the same will be conclusive and binding on the bidder.
- v) In the event as a result of techno-commercial discussions or pursuant to seeking clarifications / confirmations from bidders, while evaluating the un-priced part of the bid, any of the bidders submits a sealed envelope stating that it contains revised prices; such bidder(s) will be requested to withdraw the revised prices failing which the bid will not be considered for further evaluation.
- vi) In case any bidder does not quote for any item(s) of "Schedule of Rates" and the estimated price impact is more than 10% of the quoted price, then the bid will be rejected. If such price impact of unquoted items is 10% or less of his quoted price, then the unquoted item(s) shall be loaded highest of the price quoted by the other bidders. If such bidder happens to be lowest evaluated bidder, price of unquoted items shall be considered as included in the quoted bid price.
- 11.2 Bidders are requested to refer instructions for participating in E Tendering enclosed herewith as Annexure III and the ready reckoner for bidders available in http://www.godavarigas.in Bids submitted manually shall be rejected, the bids must be submitted on GGPLs E tendering website as follows:
- 11.2.1 PART-I: "TECHNO-COMMERCIAL/UN-PRICED BID" comprising all the above documents mentioned at 11.1.1 along with copy of EMD/Bid Bond, Tender fee (wherever applicable), copy of Power of Attorney and copy of integrity pact should be uploaded in the private area earmarked (Tender Document) in the GGPL's e tendering portal.

However, bidders must submit the original "Bid Security / EMD& tender fee, Power of Attorney, Integrity Pact and any other documents specified in the bidding documents to address mentioned in IFB, in a sealed envelope, super scribing the Tender details & number within 7 days from the date of un-priced bid opening.

The Original Bid Security/ EMD, copy of which has been uploaded, must be received within 7 days from the date of un priced bid opening, failing which the bid will be rejected notwithstanding the fact that a copy of EMD/ Bid Security was earlier uploaded by the bidder. In the event bidder fails to upload a copy of the same EMD/ Bid Security in his e-bid and hard copy of same has also not been



received as on the date & time of bid submission, the bid shall be summarily rejected. All pages of the Bid must be digitally signed by the "authorized signatory" of the Bidder. Refer Annexure I for E tendering. In e tenders, bids need to be digitally signed by the person holding power of attorney.

11.2.2 PART-II: PRICE BID

The Prices are to be filled strictly in the Schedule of Rate of the bidding documents and provision mentioned at para 11.1.2 hereinabove and To be submitted as in Excel sheet as commercial template attachment. Price bid shall contain only the prices, without any condition whatsoever.

12 SCHEDULE OF RATES / BID PRICES

- 12.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole works as described in Bidding Documents, based on the rates and prices submitted by the Bidder and accepted by the Employer. The prices quoted by the Bidders will be inclusive of all taxes except GST ((CGST & SGST/UTGST or IGST).
- 12.2 Prices must be filled in format for "Schedule of Rates [SOR]" enclosed as part of Tender document. If quoted in separate typed sheets and any variation in item description, unit or quantity is noticed; the Bid is liable to be rejected.
- 12.3 Bidder shall quote for all the items of "SOR" after careful analysis of cost involved for the performance of the completed item considering all parts of the Bidding Document. In case any activity though specifically not covered in description of item under "SOR" but is required to complete the works as per Specifications, Scope of Work / Service, Standards, General Conditions of Contract ("GCC"), Special Conditions of Contract ("SCC") or any other part of Bidding Document, the prices quoted shall deemed to be inclusive of cost incurred for such activity.
- 12.4 All duties, taxes and other levies [if any] payable by the Contractor under the Contract, or for any other cause except final **GST** (**CGST & SGST/UTGST or IGST**) shall be included in the rates / prices and the total bid-price submitted by the Bidder. Applicable rate of **GST** (**CGST & SGST/ UTGST or IGST**) on the contract value shall be indicated in Agreed Terms & Conditions (Format-F10) and SOR
- 12.5 Prices quoted by the Bidder, shall remain firm and fixed and valid until completion of the Contract and will not be subject to variation on any account. Any new taxes & Duties, if imposed by the State/ Govt. of India after due date of bid submission but before the Contractual Delivery Date, shall be reimbursed to the contractor on submission of documentary evidence for proof of payment to State/ Govt. Authorities and after ascertaining its applicability with respect to the contract.
- 12.6 The Bidder shall quote the prices in 'figures' & words. There should not be any discrepancy between the prices indicated in figures and the price indicated in words. In case of any discrepancy, the same shall be dealt as per clause no. 30 of ITB.



12.7 Further, Bidder shall also mention the **Service Accounting Codes** (SAC) / **Harmonized System of Nomenclature (HSN)** at the designated place in SOR.

TAXES & DUTIES

13 GST (CGST & SGST/UTGST or IGST)

- 13.1 Bidders are required to submit copy of the GST Registration Certificate while submitting the bids wherever **GST** (**CGST & SGST/UTGST or IGST**) is applicable.
- 13.2 Quoted prices should be inclusive of all taxes and duties, except **GST** (**CGST & SGST or IGST or UTGST**). Please note that the responsibility of payment of **GST** (**CGST & SGST or IGST or UTGST**) lies with the Supplier of Goods / Services only. Supplier of Goods / Services (Service Provider) providing taxable service shall issue an Invoice/ Bill, as the case may be as per rules/ regulation of GST. Further, returns and details required to be filled under GST laws & rules should be timely filed by Supplier of Goods / Services (Service Provider) with requisite details.

Payments to Service Provider for claiming **GST** (**CGST & SGST/UTGST or IGST**) amount will be made provided the above formalities are fulfilled. Further, GGPL may seek copies of challan and certificate from Chartered Accountant for deposit of **GST** (**CGST & SGST/UTGST or IGST**) collected from Owner.

- 13.3 In case CBEC (Central Board of Excise and Customs)/ any equivalent Central Government agency/State Government agency brings to the notice of GGPL that the Supplier of Goods / Services (Service Provider) has not remitted the amount towards **GST** (**CGST & SGST/UTGST or IGST**) collected from GGPL to the government exchequer, then, that Supplier of Goods / Services (Service Provider) shall be put under Holiday list of GGPL for period of six months as mentioned in Procedure for Evaluation of Performance of Vendors/ Suppliers/Contractors/ Consultants.
- 13.4 In case of statutory variation in **GST** (**CGST & SGST/UTGST or IGST**), other than due to change in turnover, payable on the contract value during contract period, the Supplier of Goods / Services (Service Provider) shall submit a copy of the 'Government Notification' to evidence the rate as applicable on the Bid due date and on the date of revision.

Beyond the contract period, in case GGPL is not entitled for input tax credit of GST (CGST & SGST/UTGST or IGST), then any increase in the rate of GST (CGST & SGST/UTGST or IGST) beyond the contractual delivery period shall be to Service Provider's account whereas any decrease in the rate GST (CGST & SGST/UTGST or IGST) shall be passed on to the Owner.

Beyond the contract period, in case GGPL is entitled for input tax credit of GST (CGST & SGST/UTGST or IGST), then statutory variation in applicable GST (CGST & SGST/UTGST or IGST) on supply and on incidental services, shall be to GGPLs account.



Claim for payment of GST (CGST & SGST/UTGST or IGST)/ Statutory variation, should be raised within two [02] months from the date of issue of 'Government Notification' for payment of differential (in %) GST (CGST & SGST/UTGST or IGST), otherwise claim in respect of above shall not be entertained for payment of arrears.

The base date for the purpose of applying statutory variation shall be the Bid Due Date.

- 13.5 Where the GGPL is entitled to avail the input tax credit of **GST** (**CGST & SGST/UTGST or IGST**):-
- 13.5.1 Owner/GGPL will reimburse the GST (CGST & SGST/UTGST or IGST) to the Supplier of Goods / Services (Service Provider) at actuals against submission of Invoices as per format specified in rules/ regulation of GST to enable Owner/GGPL to claim input tax credit of GST (CGST & SGST/UTGST or IGST) paid. In case of any variation in the executed quantities, the amount on which the GST (CGST & SGST/UTGST or IGST) is applicable shall be modified in same proportion. Returns and details required to be filled under GST laws & rules should be timely filed by supplier with requisite details.
- 13.5.2 The input tax credit of **GST** (**CGST & SGST/UTGST or IGST**) quoted shall be considered for evaluation of bids, as per evaluation criteria of tender document.
- 13.6 Where the GGPL is not entitled to avail/take the full input tax credit of **GST** (**CGST & SGST/UTGST or IGST**):-

Owner/GGPL will reimburse GST (CGST & SGST/UTGST or IGST) to the Supplier of Goods / Services (Service Provider) at actuals against submission of Invoices as per format specified in rules/ regulation of GST subject to the ceiling amount of GST (CGST & SGST/UTGST or IGST) as quoted by the bidder, subject to any statutory variations, except variations arising due to change in turnover. In case of any variation in the executed quantities (If directed and/or certified by the Engineer-In-Charge) the ceiling amount on which GST (CGST & SGST/UTGST or IGST) is applicable will be modified on pro-rata basis.

- 13.6.1 The bids will be evaluated based on total price including applicable GST (CGST & SGST/UTGST or IGST).
- 13.7 GGPL will prefer to deal with registered supplier of goods/ services under GST. Therefore, bidders are requested to get themselves registered under GST, it not registered yet.

However, in case any unregistered bidder is submitting their bid, their prices will be loaded with applicable **GST** (**CGST & SGST/UTGST or IGST**) while evaluation of bid. Where **GGPL** is entitled for input credit of **GST** (**CGST & SGST/UTGST or IGST**), the same will be considered for evaluation of bid as per evaluation methodology of tender document.

13.8 In case GGPL is required to pay entire/certain portion of applicable GST (CGST



& SGST/UTGST or IGST) and remaining portion, if any, is to be deposited by Bidder directly as per GST (CGST & SGST/UTGST or IGST) laws, entire applicable rate/amount of GST (CGST & SGST/UTGST or IGST) to be indicated by bidder in the SOR.

Where GGPL has the obligation to discharge **GST** (**CGST & SGST/UTGST or IGST**) liability under reverse charge mechanism and GGPL has paid or is /liable to pay **GST** (**CGST & SGST/UTGST or IGST**) to the Government on which interest or penalties becomes payable as per GST laws for any reason which is not attributable to GGPL or ITC with respect to such payments is not available to GGPL for any reason which is not attributable to GGPL, then GGPL shall be entitled to deduct/ setoff / recover such amounts against any amounts paid or payable by GGPL to Contractor / Supplier.

13.9 Contractor shall ensure timely submission of invoice(s) as per rules/ regulations of GST with all required supporting document(s) within a period specified in Contracts/ LOA to enable GGPL to avail input tax credit. Further, returns and details required to be filled under GST laws & rules should be timely filed by supplier with requisite details.

If input tax credit with respect to **GST** (**CGST & SGST/UTGST or IGST**) is not available to GGPL for any reason which is not attributable to GGPL, then GGPL shall not be obligated or liable to pay or reimburse **GST** (**CGST & SGST/UTGST or IGST**) charged in the invoice(s) and shall be entitled to / deduct/ setoff /recover the such **GST** (**CGST & SGST/UTGST or IGST UTGST**) thereupon together with all penalties and interest if any, against any amounts paid or payable by GGPL to Supplier of Goods / Services.

13.10 Anti-profiteering clause

As per Clause 171 of GST Act it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices. The Supplier of Goods / Services may note the above and quote their prices accordingly.

- 13.11 In case the GST rating of vendor on the GST portal / Govt. official website is negative / black listed, then the bids may be rejected by GGPL. Further, in case rating of bidder is negative / black listed after award of work for supply of goods / services, then GGPL shall not be obligated or liable to pay or reimburse GST to such vendor and shall also be entitled to deduct / recover such GST along with all penalties / interest, if any, incurred by GGPL.
- 13.12 The rate of GST as quoted in Price Schedule/SOR shall be considered as the prevailing present applicable rates on the Bid due date and same shall be considered for price comparison as well as for ordering. Any error of judgment on part of the Bidder in identifying the present applicable rates shall not be admitted. The applicable rate of GST as indicated by the bidders in Price Schedule/SOR shall be considered as the maximum payable in the event when no statutory variations take place and any remainder/balance GST, if payable, beyond



that quoted rates shall be borne by the Bidder. However, in the event of any statutory variations in the rate of GST, if the quoted rates are found erroneous then the base rates for calculation of statutory variations for the purpose of reimbursement of GST shall take into account either the rates actually prevalent on the due date of submission of bid or the erroneous rates quoted by the Bidders whichever is beneficial to GGPL. Consequently, any difference in GST if it becomes payable to the tax authorities shall be borne by the Bidder.

13.13 Wherever TDS under GST Laws has been deducted from the invoices raised / payments made to the vendors, as per the provisions of the GST law / Rules, Vendors should accept the corresponding GST-TDS amount populated in the relevant screen on GST common portal (www.gst.gov.in). Further, Vendors should also download the GST TDS certificate from GST common portal (reference path: Services > User Services > View/Download Certificates option).

14 **BID CURRENCIES**:

Bidders must submit bid in Indian Rupees only.

15 **BID VALIDITY**

15.1 Bids shall be kept valid for period specified in BDS from the final Due date of submission of bid'. A Bid valid for a shorter period may be rejected by GGPL as 'non-responsive'.

In exceptional circumstances, prior to expiry of the original 'Bid Validity Period', the Employer may request the Bidders to extend the 'Period of Bid Validity' for a specified additional period. The request and the responses thereto shall be made in writing or by fax/email. A Bidder may refuse the request without forfeiture of his EMD. A Bidder agreeing to the request will not be required or permitted to modify his Bid, but will be required to extend the validity of its EMD for the period of the extension and in accordance with "ITB: Clause-16" in all respects.

16 EARNEST MONEY DEPOSIT

- 16.1 Bids must be accompanied with 'Earnest Money / Bid Security' in the form of 'Demand Draft' or 'Banker's Cheque '[in favor of Godavari Gas Pvt. Ltd, payable at the place as defined in BDS)] or 'Bank Guarantee' or 'Letter of Credit' as per the format given in Form 4/4A of the bidding documents. Bidders shall ensure that 'Bid Security', having a validity of at least ' two [02] months' beyond the validity of the bid, must accompany the Bid in the format(s) made available in the Bidding Document. Bid not accompanied with 'Bid Security', or 'Bid Security' not in requisite form shall be liable for rejection. The Bid Security shall be submitted in Indian Rupees only.
- 16.2 The 'Bid Security' is required to protect GGPL against the risk of Bidder's conduct, which would warrant the 'Bid Security's' forfeiture, pursuant to "ITB: Clause-16.7".
- 16.3 GGPL shall not be liable to pay any Bank charges, commission or interest etc. on



the amount of 'Bid Security'. In case 'Bid Security' is in the form of a 'Bank Guarantee', the same shall be from any Indian scheduled Bank or a branch of an International Bank situated in India and registered with 'Reserve Bank of India' as Scheduled Foreign Bank and in compliance to instructions given in format F-4/4-A. However, in case of 'Bank Guarantee' from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth in excess of Rs. 100 Crores [Rupees One Hundred Crores] and a declaration to this effect should be made by such commercial Bank either in the 'Bank Guarantee' itself or separately on its letterhead. 'Earnest Money / Bid Security' shall be valid for 'two [02] months' beyond the 'Bid Validity Period'.

- 16.4 Any Bid not secured in accordance with "ITB: Clause-16.1 & Clause-16.3" may be rejected by GGPL as non-responsive.
- 16.5 Unsuccessful Bidder's EMD will be discharged/returned as promptly as possible, but not later than "thirty [30] days" after finalization of tendering process.
- 16.6 The successful Bidders EMD will be discharged upon the Bidder's acknowledging the Award' and signing the, Agreement' (if applicable) and furnishing the "Contract Performance Security (CPS) / Security Deposit" pursuant to clause no. 38 of ITB.
- 16.7 Notwithstanding anything contained herein, the EMD may also be forfeited in any of the following cases:
- (a) If a Bidder withdraws his Bid during the "Period of Bid Validity"
- (b) If a Bidder has indulged in corrupt/fraudulent /collusive/coercive practice
- (c) If the Bidder modifies Bid during the period of bid validity (after Due Date and Time for Bid Submission).
- (d) Violates any other condition, mentioned elsewhere in the Tender Document, which may lead to forfeiture of EMD.
- (e) In the case of a successful Bidder, if the Bidder fails to:
 - (i) to acknowledge receipt of the "Notification of Award" / Fax of Acceptance[FOA]",
 - (ii) to furnish "Contract Performance Security / Security Deposit", in accordance with "ITB: Clause-38"
 - (iii) to accept "arithmetical corrections" as per provision of the clause 30 of ITB.
- 16.8 In case EMD is in the form of "Bank Guarantee" or "Letter of Credit", the same must indicate the Tender Document No. and the name of Tender Document for which the Bidder is quoting. This is essential to have proper correlation at a later date.
- 16.9 MSEs (Micro & Small Enterprises) are exempted from submission of EMD in accordance with the provisions of PPP-2012 and Clause 40 of ITB. The Government Departments/PSUs are also exempted from the payment of EMD. However, Traders/Dealers/ Distributors /Stockiest /Wholesaler are not entitled for exemption of EMD. Further, Startups are also exempted from the payment of EMD.
- 16.10 In addition to existing specified form (i.e. Demand Draft (DD)/ Banker's Cheque / Bank Guarantee) mentioned in tender documents for submission of EMD/Bid



Bond, the bidder can also submit the EMD through online banking transaction i.e. IMPS/NEFT/RTGS etc. While remitting, the bidder must indicate EMD and tender/E-tender no. under remarks. Bidders shall be required to submit/upload the successful transaction details along-with their bid/e-bid in addition to forwarding the details to dealing officer through email/letter with tender reference number immediately after remittance of EMD.

In absence of submitting/ uploading the remittance details, the bids are likely to be considered as bid not accompanied with EMD. Further, in case of the above online transaction, submission of EMD in original is not applicable.

- 16.11 In case of forfeiture of EMD/ Bid Security, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by GGPL. The forfeiture amount will be subject to final decision of GGPL based on other terms and conditions of order/contract.
- 16.12 EMD/Bid Bond will not be accepted in case the same has reference of 'remitter'/'financer' other than bidder on the aforementioned financial instrument of EMD/ Bid Bond submitted by the bidder and bid of such bidder will be summarily rejected.

17 PRE-BID MEETING (IF APPLICABLE)

- 17.1 The Bidder(s) or his designated representatives are invited to attend a "Pre-Bid Meeting" which will be held at address specified in IFB. It is expected that a bidder shall not depute more than 02 representatives for the meeting.
- 17.2 Purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage and give hands-on e-tendering.
- 17.3 Text of the questions raised and the responses given, together with any responses prepared after the meeting, will be uploaded on GGPL e-tendering website against the Tender. Any modification of the Contents of Bidding Documents listed in "ITB: Clause-7.1", that may become necessary as a result of the Pre-Bid Meeting shall be made by the Employer exclusively through the issue of an Addendum / Corrigendum pursuant to "ITB: Clause-9", and not through the minutes of the Pre-Bid Meeting.
- 17.4 Non-attendance of the Pre-Bid Meeting will not be a cause for disqualification of Bidder.

18 FORMAT AND SIGNING OF BID

18.1 The original and all copies of the Bid shall be typed or written in indelible ink [in the case of copies, photocopies are also acceptable] and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder (as per POA). The name and position held by each person signing, must be typed or printed below the signature. All pages of the Bid except for un-amended printed literature where entry(s) or amendment(s) have been made shall be initialed by the person or persons signing the Bid.



- 18.2 The Bid shall contain no alterations, omissions, or additions, unless such corrections are initialed by the person or persons signing the Bid.
- 18.3 In case of e-tendering, digitally signed documents to be uploaded as detailed in addendum to ITB.

19 ZERO DEVIATION AND REJECTION CRITERIA

- 19.1 ZERO DEVIATION: Deviation to terms and conditions of "Bidding Documents" may lead to rejection of bid. GGPL will accept bids based on terms & conditions of "Bidding Documents" only. Bidder may note GGPL will determine the substantial responsiveness of each bid to the Bidding Documents pursuant to provision contained in clause 29 of ITB. For purpose of this, a substantially responsive bid is one which conforms to all terms and conditions of the Bidding Documents without deviations or reservations. GGPL's determination of a bid's responsiveness is based on the content of the bid itself without recourse to extrinsic evidence. GGPL reserves the right to raise technical and/or commercial query(s), if required, may be raised on the bidder(s). The response(s) to the same shall be in writing, and no change in the price(s) or substance of the bids shall be sought, offered or permitted. The substance of the bid includes but not limited to prices, completion, scope, technical specifications, etc. Bidders are requested to not to take any deviation/exception to the terms and conditions laid down in this "Tender Documents", and submit all requisite documents as mentioned in this "Tender Documents", failing which their offer will be liable for rejection. If a bidder does not reply to the queries in the permitted time frame then its bid shall be evaluated based on the documents available in the bid.
- 19.2 **REJECTION CRITERIA:** Notwithstanding the above, deviation to the following clauses of Tender document shall lead to summarily rejection of Bid:
- (a) Firm Price
- (b) Earnest Money Deposit / Bid Security
- (c) Specifications & Scope of Work
- (d) Schedule of Rates / Price Schedule / Price Basis
- (e) Duration / Period of Contract/ Completion schedule
- (f) Period of Validity of Bid
- (g) Price Reduction Schedule
- (h) Contract Performance Security
- (i) Guarantee / Defect Liability Period
- (j) Arbitration / Resolution of Dispute/Jurisdiction of Court
- (k) Force Majeure & Applicable Laws
- (l) Integrity Pact, if Applicable
- (m) Any other condition specifically mentioned in the tender document elsewhere that non-compliance of the clause lead to rejection of bid

Note: Further, it is once again reminded not to mention any condition in the Bid which is contradictory to the terms and conditions of Tender document.



20 E-PAYMENT

GGPL Ltd has initiated payments to Suppliers and Contractors electronically, and to facilitate the payments electronically through 'e-banking'. The successful bidder should give the details of his bank account as per the bank mandate form.

[A] **SUBMISSION OF BIDS**

21 SUBMISSION, SEALING AND MARKING OF BIDS

- 21.1 In case of e-tendering, bids shall be submitted through e-tender mode in the manner specified elsewhere in tender document. No Manual/ Hard Copy (Original) offer shall be acceptable.
- 21.2 In case of manual tendering bid must be submitted in sealed envelope. If the envelope is not sealed & marked as per Clause No. 11 of ITB, the employer will assume no responsibility for misplacement or pre-mature opening of the bid.
- 21.3 All the bids shall be addressed to the owner at address specified in IFB.
- 21.4 Bids submitted under the name of AGENT/CONSULTANT/REPRESENTATIVE/RETAINER/ASSOCIATE etc. on behalf of a bidder/affiliate shall not be accepted.

22 DEADLINE FOR SUBMISSION OF BIDS

- 22.1 In case of e-bidding, the bids must be submitted through e-tender mode not later than the date and time specified in the tender documents/BDS.
- 22.2 In case of manual tendering EMD along with bid must be submitted within the due date & time.
- 22.3 GGPL may, in exceptional circumstances and at its discretion, extend the deadline for submission of Bids (clause 9 of ITB refers). In which case all rights and obligations of GGPL and the Bidders, previously subject to the original deadline will thereafter be subject to the deadline as extended. Notice for extension of due date of submission of bid will be uploaded on GGPL's website/communicated to the bidders.

23 <u>LATE BIDS</u>

- 23.1 Any bids received after the notified date and time of closing of tenders will be treated as late bids.
- 23.2 In case of e-tendering, e-tendering system of GGPL shall close immediately after the due date for submission of bid and no bids can be submitted thereafter.
- 23.3 Unsolicited Bids or Bids received to address other than one specifically stipulated in the tender document will not be considered for evaluation/opening/award if not received to the specified destination within stipulated date & time.



24 MODIFICATION AND WITHDRAWAL OF BIDS

24.1 Modification and withdrawal of bids shall be as follows:-

24.2 IN CASE OF E- TENDERING

The bidder may withdraw or modify its bid after bid submission but before the due date and time for submission as per tender document.

24.1.2 IN CASE OF MANUAL BIDDING

The bidder may withdraw or modify its bid after bid submission but before the due date for submission as per tender document provided that the written notice of the modification/ substitution/ withdrawal in received by GGPL prior to the deadline for submission of bid.

- 24.2 The modification shall also the prepared, sealed, marked and dispatch in accordance with the provision of the clause 22 of ITB, with the after and inner envelopes additionally marked modification or withdrawal as appropriate. A withdrawal notice may also be sent by e-mail or fax but followed by a signed confirmation copy post not later than the deadline for submission of bids. No bid shall be modified/ withdrawn after the deadline for submission of bids.
- 24.3 No bid shall be allowed to be withdrawn/ modified/substitute in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidder on the Bid Form. Withdrawal/Modification/Substitution of a bid during this interval shall result in the bidder's forfeiture of his bid security pursuant to clause 16 of ITB and rejection of bid.
- 24.4 The latest Bid submitted by the Bidder shall be considered for evaluation and all other Bid(s) shall be considered to be unconditionally withdrawn.
- 24.5 In case after price bid opening the lowest evaluated bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, GGPL shall forfeit EMD paid by the bidder and such bidders shall be debarred from participation in re-tendering of the same job(s)/item(s). Further, such bidder will be put on holiday for a period of six months after following the due procedure.

25 EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

GGPL reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the ground for GGPL's action. However, Bidder if so desire may seek the reason (in writing) for rejection of their Bid to which GGPL shall respond quickly.

[B] BID OPENING AND EVALUATION



26 BID OPENING

26.1 Unpriced Bid Opening:

GGPL will open bids, in the presence of bidders" designated representatives who choose to attend, at date, time and location stipulated in the BDS. The bidders representatives, who are present shall sign a bid opening register evidencing their attendance.

26.2 Priced Bid Opening:

- 26.2.1 GGPL will open the price bids of those bidders who meet the qualification requirement and whose bids is determined to be technically and commercially responsive. Bidders selected for opening of their price bids shall be informed about the date of price bid opening. Bidders may depute their authorized representative to attend the bid opening. The bidders" representatives, who are present shall sign a register evidencing their attendance and may be required to be present on a short notice.
- 26.2.2 The price bids of those Bidders who were not found to be techno-commercially responsive shall not be opened in both manual tendering and e-tendering. In case of Manual Tender, the envelope containing Price Bid shall be returned unopened after opening of the price bids of techno-commercially responsive Bidders.
- **26.2.3** In case of bids invited under the single bid system, bid shall be opened on the specified due date & time.

27 CONFIDENTIALITY

Information relating to the examination, clarification, evaluation and comparison of Bids, and recommendations for the award of a Contract, shall not be disclosed to Bidder(s) or any other persons not officially concerned with such process.

28 CONTACTING THE EMPLOYER

- 28.1 From the time of Bid opening to the time of award of Contract, if any Bidder wishes to contact the Employer on any matter related to the Bid, it should do so in writing. Information relating to the examination, clarification, evaluation & recommendation for award shall not be disclosed.
- 28.2 Any effort by the Bidder to influence the Employer in the Employer's 'Bid Evaluation', 'Bid Comparison', or 'Contract Award' decisions may result in the rejection of the Bidder's Bid and action shall be initiated as per procedure in this regard.

29 EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS

29.1 The owner's determination of a bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid:-



- (a) Meets the "Bid Evaluation Criteria" of the Bidding Documents;
- (b) Has been properly signed;
- (c) Is accompanied by the required 'Earnest Money / Bid Security';
- (d) Is substantially responsive to the requirements of the Bidding Documents; and
- (e) Provides any clarification and/or substantiation that the Employer may require to determine responsiveness pursuant to "ITB: Clause-29.2"
- 29.2 A substantially responsive Bid is one which conforms to all the terms, conditions and specifications of the Bidding Documents without material deviations or reservations or omissions for this purpose employer defines the foregoing terms below:-
- a) "Deviation" is departure from the requirement specified in the tender documents.
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirement in the tender documents.
- c) "Omission" is the failure to submit part or all of the information or documentation required in the tender document.
- 29.3 A material deviation, reservation or omission is one that,
- i) If accepted would,
- ii) Affect in any substantial way the scope, quality, or performance of the job as specified in tender documents.
- iii) Limit, in any substantial way, inconsistent with the Tender Document, the Employer's rights or the tenderer's obligations under the proposed Contract.
- b) If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.
- 29.4 The employer shall examine all aspects of the bid to confirm that all requirements have been met without any material deviation, reservation or omission.
- 29.5 If a Bid is not substantially responsive, it may be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the of material deviation, reservation or omission.

30 CORRECTION OF ERRORS

- 30.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
- (i) When there is a difference between the rates in figures and words, the rate which corresponds to the amount worked out by the Bidder (by multiplying the quantity and rate) shall be taken as correct.
- (ii) When the rate quoted by the Bidder in figures and words tallies but the amount is incorrect, the rate quoted by the contractor shall be taken as correct and not the amount and the amount shall be re-calculated/ corrected accordingly.
- (iii) When it is not possible to ascertain the correct rate, in the manner prescribed



above, the rate as quoted in words shall be adopted and the amount worked out, for comparison purposes

30.2 The amount stated in the bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors. If the bidder does not accept the corrected amount of bid, its bid will be rejected, and the bid security shall be forfeited.

31 CONVERSION TO SINGLE CURRENCY FOR COMPARISON OF BIDS

Not Applicable. All bids submitted must be in the currency specified at clause 14 of ITB.

32 EVALUATION AND COMPARISON OF BIDS

Bid shall be evaluated as per evaluation criteria mentioned in Section-II of bidding documents (refer clause 7.0 of ITB). The employer shall only use the criteria and methodology indicated in Section-II of bidding documents. No other criteria/methodology shall be permitted.

In case of a tie at the lowest bid (L1) position between two or more startup/non-startup bidders, the order/LOA will be placed on the bidder who has higher/highest turnover in last audited financial year.

In case there is a tie at the lowest bid (L1) position between only startup bidders and none of them has past turnover, the order/LOA will be placed on the startup who is registered earlier with Department of Industrial Promotion and Policy.

33 <u>COMPENSATION FOR EXTENDED STAY – Not Applicable</u>

34 PURCHASE PREFERENCE

Purchase preference to Central government public sector Undertaking and Micro and Small Enterprises (MSEs) shall be allowed as per Government instructions in vogue.

[C] AWARD OF CONTRACT

35 AWARD

Subject to "ITB: Clause-29", GGPL will award the Contract to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the lowest provided that bidder, is determined to be qualified to satisfactorily perform the Contract.

36 NOTIFICATION OF AWARD / FAX OF ACCEPTANCE

36.1 Prior to the expiry of 'Period of Bid Validity', GGPL will notify the successful Bidder in writing, in the form of "Notification of Award" / "Fax of Intent [FOI]"/ Fax of Acceptance [FOA]/through fax/e-mail, that his Bid has been accepted. The notification of award / Fax of Intent/Fax of Acceptance will constitute the formation of the Contract.



- 36.2 Contract period shall commence from the date of "Notification of Award" or as mentioned in the Notification of Award. The "Notification of Award" will constitute the formation of a Contract, until the Contract has been effected pursuant to signing of Contract as per "ITB: Clause-37".
 - Upon the successful Bidder's / Contractor's furnishing of 'Contract Performance Security / Security Deposit', pursuant to "ITB: Clause-38", GGPL will promptly discharge his 'Earnest Money / Bid Security', pursuant to "ITB: Clause-16"
- 36.3 The Order/ contract value mentioned above is subject to Price Reduction Schedule clause

37 SIGNING OF AGREEMENT

- 37.1 GGPL will award the Contract to the successful Bidder, who, within 'fifteen [15] days of receipt of the same, shall sign and return the acknowledged copy to GGPL.
- 37.2 The successful Bidder/Contractor shall be required to execute an 'Agreement' in the proforma given in this Bidding Document on a 'non-judicial stamp paper' of appropriate value [cost of the 'stamp-paper' shall be borne by the successful Bidder/Contractor] and of 'state' specified in Bidding Data Sheet (BDS)only, within 'fifteen [15] days' of receipt of the "Fax of Acceptance [FOA]" of the Tender by the successful Bidder/Contractor failure on the part of the successful Bidder/Contractor to sign the 'Agreement' within the above stipulated period, shall constitute sufficient grounds for forfeiture of EMD/Security Deposit.

38 CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT

- 38.1 Within 30 days of the receipt of the notification of award/ Fax of Acceptance from GGPL, the successful bidder shall furnish the Contract Performance Security/Guarantee in accordance with of General Conditions of the Contract. The Contract Performance Security/Guarantee shall be in the form of either Banker's Cheque or Demand Draft or Bank Guarantee or Letter of Credit and shall be in the currency of the Contract. However, CPS shall not be applicable in cases wherein the individual order/contract value as specified in Notification of Award is less than INR 5 Lakh (exclusive of GST).
- 38.2 The contract performance security shall be for an amount equal to specified in Bidding Data Sheet (BDS) towards faithful performance of the contractual obligations and performance of equipment. For the purpose of Contract Performance Security, Contract/order value shall be exclusive of GST (CGST & SGST/UTGST or IGST) to be reimbursed by the Owner.
 - Bank Guarantee towards performance security/ security deposit shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank in case of Indian bidder as well as foreign bidder. However, in case of bank guarantees from banks other than the Nationalized Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores and a declaration to this effect should



be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead. This bank guarantee shall be valid till three months beyond the Defect Liability Period (DLP) for the total order value including Post Warranty Maintenance charges.

- 38.3 Failure of the successful bidder to comply with the requirements of this article shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.
- 38.4 The CPBG/Security deposit has to cover the entire contract value including extra works/services also. As long as the CPBG/Security deposit submitted at the time of award take cares the extra works/ services executed and total executed value are within the awarded contract price, there is no need for additional security deposit/ Contract Performance Security. As soon as the total executed value is likely to burst the ceiling of awarded contract price, the contractor should furnish additional security deposit/ CPBG.
- 38.5 Further, the bidder can submit CPBG on line through issuing bank to GGPL directly as per Ministry of Finance (MOF) Department of financial service direction vide letter ref number F.No.7/112/2011-BOA dated 17th July 2012. In such cases confirmation will not be sought from issuing banker by GGPL.
- 38.6 In addition to existing specified form (i.e. Demand Draft (DD)/ Banker's Cheque/ Bank Guarantee/Letter of Credit) mentioned in tender documents for submission of Security Deposit/ Contract Performance Guarantee, the successful bidder can also submit the Security Deposit/ Contract Performance Guarantee through online banking transaction i.e. IMPS/NEFT/RTGS etc. For this purpose, the details of GGPL's Bank Account is mentioned in BDS.
 - While remitting, the bidder must indicate "Security Deposit/ Contract Performance Guarantee against FOA/DLOA/PO no. _____ (contractor/ vendor to specify the FOA/DLOA/PO No.)" under remarks column of respective bank portal. The contractor/vendor shall be required to submit the successful transaction details to the dealing officer immediately through email/letter and necessarily within 30 days from the date of Fax of Acceptance."
- 38.7 In case of forfeiture of Contract Performance Security/ Security Deposit, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by GGPL. The forfeiture amount will be subject to final decision of GGPL based on other terms and conditions of order/ contract.
- 38.8 The Service Provider will also submit covering letter along with CPS as per format at F-9.
- 38.9 CPBG/Security Deposit will not be accepted in case the same has reference of 'remitter'/'financer' other than bidder on the aforementioned financial instrument of CPBG/ Security Deposit submitted by the Service Provider.

39 PROCEDURE FOR ACTION IN CASE CORRUPT/ FRAUDULENT/COLLUSIVE/ COERCIVE PRACTICES

39.1 Procedure for action in case Corrupt/ Fraudulent/Collusive/Coercive Practices is enclosed at Annexure-I.



39.2 The Fraud Prevention Policy document is available on available on GAIL"s website.

39.3 NON-APPLICABILITY OF ARBITRATION CLAUSE IN CASE OF BANNING OF VENDORS/ SUPPLIERS / CONTRACTORS/BIDDERS/ CONSULTANTS INDULGED IN FRAUDULENT/ COERCIVE PRACTICES

Notwithstanding anything contained contrary in GCC and other "CONTRACT DOCUMENTS", in case it is found that the Vendors/ Suppliers / Contractors/Bidders/ Consultants indulged in fraudulent/ coercive practices at the time of bidding, during execution of the contract etc., and/or on other grounds as mentioned in GGPLs "Procedure for action in case

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Corrupt/Fraudulent/Collusive/Coercive Practices" (Annexure-I), the contractor/bidder shall be banned (in terms of aforesaid procedure) from the date of issuance of such order by GGPL, to such Vendors/ Suppliers / Contractors/Bidders/ Consultants.

The Vendor/ Supplier / Contractor/ Bidder/Consultant understands and agrees that in such cases where Vendor/ Supplier / Contractor/ Bidder/Consultant has been banned (in terms of aforesaid procedure) from the date of issuance of such order by Godavari Gas Private Ltd., such decision of Godavari Gas Private Ltd. shall be final and binding on such Vendor/ Supplier / Contractor/ Bidder/Consultant and the "Arbitration clause" in the GCC and other "CONTRACT DOCUMENTS" shall not be applicable for any consequential issue /dispute arising in the matter.

40 PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES

Following provision has been incorporated in tender for MSEs, in line with notification of Government of India, vide Gazette of India No. 503 dated 26.03.2012 proclaiming the Public Procurement Policy on procurement of goods and services from Micro and Small Enterprises (MSEs)

- i) Issue of tender document to MSEs free of cost.
- ii) Exemption to MSEs from payment of EMD/Bid Security.
- In Tender, participating Micro and Small Enterprises quoting price within price band of L1+15% shall also be allowed to supply a portion of requirement by bringing down their prices to L1 price in a situation where L1 price is from someone other than a micro and small enterprises and such micro and small enterprises shall be allowed to supply upto 25% of the total tendered value. In case of more than one such Micro and Small Enterprises, the supply shall be shared proportionately (to tendered quantity). Further, out of above 25%, 5% (20% of 25%) shall be reserved for MSEs owned by SC/ST entrepreneurs. Further, 3% shall be reserved for MSEs owned by women within above 25% reservation. The respective



quota(s) shall be transferred to other MSEs in case of non-availability of MSEs owned by SC/ST entrepreneurs/ MSEs owned by Women.

Further, the definition of MSEs owned by Women shall be as per the definition for MSEs owned by SC/ST Enterpreneurs.

The quoted prices against various items shall remain valid in case of splitting of quantities of the items above.

In case tendered item is non-splitable or non- dividable (specified in Bid Data Sheet), MSE quoting price within price band L1 (other than MSE) + 15%, may be awarded for full/ complete supply of total tendered value subject to matching of L1 price.

- 40.2 The MSE(s) owned by SC/ST Entrepreneurs shall mean:
 - a) In case of proprietary MSE, Proprietor(s) shall be SC/ST.
 - b) In case of partnership MSE, the SC/ST partners shall be holding atleast 51% share in the unit
 - c) In case of private Limited Companies, at least 51% share is held by SC/ST. If the MSE is owned by SC/ST Entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.

The MSE(s) owned by Women shall mean:-

- a) In case of proprietary MSE, Proprietor(s) shall be Women.
- b) In case of partnership MSE, the Women partners shall be holding atleast 51% share in the unit
- c) In case of private Limited Companies, at least 51% share is held by Women. If the MSE is owned by Women Entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.
- 40.3 In case bidder is a Micro or Small Enterprise under the Micro, Small and Medium Enterprises Development Act, 2006, the bidder shall submit the following:
 - a) Documentary evidence that the bidder is a Micro or Small Enterprises registered with District Industries Centers or Khadi and Village Industries National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro, Small and Medium Enterprises or Udyog Aadhaar Memorandum.
 - b) If the MSE is owned by SC/ST Entrepreneurs/ Women Entrepreneur, the bidder shall furnish appropriate documentary evidence in this regard.

The above documents submitted by the bidder shall be duly certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) and notary public with legible stamp. If the bidder does not provide the above confirmation or appropriate document or any evidence, then it will be presumed that they do not qualify for any preference admissible in the Public Procurement Policy (PPP) 2012.

Further, MSEs who are availing the benefits of the Public Procurement Policy



(PPP) 2012 get themselves registered with MSME Data Bank being operated by NSIC, under SME Division, M/o MSME, in order to create proper data base of MSEs which are making supplies to CPSUs.

- 40.1 If against an order placed by GGPL, successful bidder(s) (other than Micro/Small Enterprise) is procuring material/services from their sub-vendor who is a Micro or Small Enterprise registered with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro, Small and Medium Enterprises with prior consent in writing of the purchasing authority/Engineer-incharge, the details like Name, Registration No., Address, Contact No. details of material & value of procurement made, etc. of such Enterprises shall be furnished by the successful bidder at the time of submission of invoice/Bill.
- 40.2 The benefit of policy is not extended to the traders/dealers/Distributors/Stockiest/Wholesalers.
- 40.3 NSIC has initiated a scheme of "Consortia and Tender Marketing Scheme" under which they are assisting the Micro & Small enterprises to market their products and services through tender participation on behalf of the individual unit or through consortia.

Accordingly, if the MSEs or the consortia, on whose behalf the bid is submitted by NSIC, is meeting the BEC and other terms and conditions of tender their bid will be considered for further evaluation. Further, in such cases a declaration is to be submitted by MSE/ consortia on their letter head (s) that all the terms and conditions of tender document shall be acceptable to them.

41 AHR ITEMS

In item rate contract where the quoted rates for the items exceed 50% of the estimate rates, such items will be considered as Abnormally High Rates (AHR) items and payment of AHR items beyond the SOR stipulated quantities shall be made at the lowest amongst the following rates:

- I) Rates as per SOR, quoted by the Contractor/Bidder.
- II) Rate of the item, which shall be derived as follows:
- a. Based on rates of Machine and labour as available from the contract (which includes contractor's supervision, profit, overheads and other expenses).
- b. In case rates are not available in the contract, rates will be calculated based on prevailing market rates of machine, material and labour plus 15% to cover contractor's supervision profit, overhead & other expenses.

42 <u>VENDOR PERFORMANCE EVALUATION</u>

Shall be as stipulated Annexure II to ITB herewith.

(i) Clause no. 3.0 i)

<u>Preparation of Performance Rating Data Sheet</u>

Performance rating data Sheet for each and every Vendor/
Supplier/Contractor/Consultant for all orders/Contracts with a value of Rs. 50



Lakhs and above is recommended to be drawn up. Further, Performance rating data Sheet for orders/contracts of Vendor/Supplier/Contractor/ Consultant who are on watch list/holiday list/ banning list shall be prepared irrespective of order/contract value. These data sheets are to be separately prepared for orders/contracts related to Projects and O&M. Format, Parameters, Process, responsibility for preparation of Performance Rating Data Sheet are separately mentioned.

(ii) Clause no. 4.0 "EXCLUSIONS"

The following would be excluded from the scope of evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants:

- i) Orders/Contracts below the value of Rs. 50 Lakhs if Vendor/ Supplier/Contractor/ Consultant is not on watch list/ holiday list/ banning list.
- ii) Orders for Misc./Administrative items/ Non stock Non valuated items (PO with material code ending with 9).

However, concerned Engineer-in-Charge /OICs will continue to monitor such cases so as to minimize the impact on Projects/O&M plants due to nonperformance of Vendors/ Suppliers/Contractors/ Consultants in all such cases.

(iii) Clause no. 5.1 v) and 5.3 v)

When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where performance rating is "POOR" (as per Performance Rating carried out after execution of Order/ Contract and where no reply/ unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/ Consultant along with sharing the performance rating)

Recommend such defaulting Vendor/Supplier/Contractor/ Consultant for the following action:

(a) **First such instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor/ Consultant shall be put on watch list for a period of Three (3) Years.

Such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).

The Yellow card will be automatically revoked after a period of three years unless the same is converted into Red Card due to subsequence instances of poor/ non-performance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant.

(b) Second such instance in other ongoing order (s)/contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/



Contractor/ Consultant

- (i) Poor Performance due to reasons other than Quality: **Putting on Holiday for a period of One Year**
- (ii) Poor Performance on account of Quality (if any mark obtained against Quality parameter is less than 30):

 Putting on Holiday for a period of Two Years
- (c) Subsequent instances (more than two) in other ongoing order (s)/contract (s) or new order (s)/contact (s) on such Vendor/Supplier/ Contractor/ Consultant: Putting on Holiday for a period of Three Years
- B) Where Poor/Non-Performance leading to termination of contract or Offloading of contract due to poor performance attributable to Vendor/Supplier/ Contractor/Consultant (under second para of Clause no. 2.17.3 of GCC-Services)
 - (a) First instance: Advisory notice (Yellow Card) shall be issued and Vendor/Supplier/Contractor /Consultant shall be put on watch list for a period of Three (3) Years.

Further such vendor will not be allowed to participate in the retender of the same supply/work/services of that location which has terminated / offloaded. Moreover, it will be ensured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken.

However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).

The Yellow card will be automatically revoked after a period of three years unless the same is converted into Red Card due to subsequence instances of poor/ non-performance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant.

- (b) Second instances in other ongoing order (s)/contract (s) or new order (s)/contact (s) on such Vendor/Supplier/Contractor/Consultant: Holiday (Red Card) for period of One Year and they shall also to be considered for Suspension.
- (c) Subsequent instances (more than two) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday (Red Card) for period of Three Years and they shall also to be considered for Suspension.
- (C) Where Performance rating is "FAIR":

 Issuance of warning to such defaulting Vendor/ Supplier/Contractor/

 Consultant to improve their performance.

43 INCOME TAX & CORPORATE TAX

43.1 Income tax deduction shall be made from all payments made to the contractor as per the rules and regulations in force and in accordance with the Income Tax Act



Tender No.; **GGPL/C&P/SR 1000013/2022-23/07** prevailing from time to time.

- 43.2 Corporate Tax liability, if any, shall be to the contractor's account.
- 43.3 Work Contract tax/ GST as may be applicable shall be deducted as per trade tax.
- 43.4 TDS, wherever applicable, shall be deducted as per applicable act/law/rule.

43.4 MENTIONING OF PAN NO. IN INVOICE/BILL

As per CBDT Notification No. 95/2015 dated 30.12.2015, mentioning of PAN no. is mandatory for procurement of goods / services/works/consultancy services exceeding Rs. 2 Lacs per transaction.

Accordingly, supplier/ contractor/ service provider/ consultant should mention their PAN no. in their invoice/ bill for any transaction exceeding Rs. 2 lakhs. As provided in the notification, in case supplier/ contractor/ service provider/ consultant do not have PAN no., they have to submit declaration in Form 60 along with invoice/ bill for each transaction.

Payment of supplier/ contractor / service provider/ consultant shall be processed only after fulfillment of above requirement

44 DISPUTE RESOLUTION MECHANISM

1.0 CONCILIATION

GGPL has framed the Conciliation Rules 2010 in conformity with Part – III of the Arbitration and Conciliation Act 1996 as amended from time to time for speedier, cost effective and amicable settlement of disputes through conciliation. All issue(s)/dispute(s) arising under the Contract, which cannot be mutually resolved within a reasonable time, may be referred for conciliation in accordance with GGPL Conciliation Rules 2010 as amended from time to time A copy of the said rules have been made available on GGPL's web site.

Where invitation for Conciliation has been accepted by the other party, the Parties shall attempt to settle such dispute(s) amicably under Part-III of the Arbitration and Conciliation Act, 1996 and GGPL Conciliation Rules, 2010. It would be only after exhausting the option of Conciliation as an Alternate Dispute Resolution Mechanism that the Parties hereto shall invoke Arbitration Clause. For the purpose of this clause, the option of 'Conciliation' shall be deemed to have been exhausted, even in case of rejection of 'Conciliation' by any of the Parties.

2.0 ARBITRATION

All issue(s)/dispute(s) excluding the matters that have been specified as excepted matters and listed at clause no. 2.6 and which cannot be resolved through Conciliation, such issue(s)/dispute(s) shall be referred to arbitration for adjudication by Sole Arbitrator.

The party invoking the Arbitration shall have the option to either opt for Ad-hoc Arbitration as provided at Clause 2.1 below or Institutionalized Arbitration as provided at Clause 2.2 below, the remaining clauses from 2.3 to 2.7 shall apply to both Ad-hoc



and Institutional Arbitration:-

2.1 On invocation of the Arbitration clause by either party, GGPL shall suggest a panel of three independent and distinguished persons (Retd Supreme Court & High Court Judges only) to the other party from the Panel of Arbitrators maintained by 'Delhi International Arbitration Centre (DIAC) to select any one among them to act as the Sole Arbitrator. In the event of failure of the other party to select the Sole Arbitrator within 30 days from the receipt of the communication from GGPL suggesting the panel of arbitrators, the right of selection of the sole arbitrator by the other party shall stand forfeited and GGPL shall appoint the Sole Arbitrator from the suggested panel of three Arbitrators for adjudication of dispute(s). The decision of GGPL on the appointment of the sole arbitrator shall be final and binding on the other party. The fees payable to Sole Arbitrator shall be governed by the fee Schedule of "Delhi International Arbitration Centre".

OR

- 2.2 If a dispute arises out of or in connection with this contract, the party invoking the Arbitration shall submit that dispute to any one of the Arbitral Institutions i.e. ICADR/ICA/DIAC/SFCA and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd Supreme Court/High Court Judge to be appointed / nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.
- 2.3 The cost of arbitration proceedings shall be shared equally by the parties.
- 2.4 The Arbitration proceedings shall be in English language and the seat, venue and place of Arbitration shall be Andhra Pradesh, India only.
- 2.5 Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matter relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at Andhra Pradesh.
- 2.6 List of Excepted matters:
 - a) Dispute(s)/issue(s) involving claims below Rs 25 lakhs and above Rs 25 crores.
 - b) Dispute(s)/issue(s) relating to indulgence of Contractor/Vendor/Bidder in corrupt/fraudulent/collusive/coercive practices and/or the same is under investigation by CBI or Vigilance or any other investigating agency or Government.
 - c) Dispute(s)/issue(s) wherein the decision of Engineer-In-Charge/owner/GGPL has been made final and binding in terms of the Contract.
- 2.7. Disputes involving claims below Rs 25 Lakhs and above Rs. 25 crores:- Parties mutually agree that dispute(s)/issue(s) involving claims below Rs 25 Lakhs and



above Rs 25 crores shall not be subject matter of Arbitration and are subject to the exclusive jurisdiction of the Court(s) situated at Andhra Pradesh.

3. GOVERNING LAW AND JURISDICTION:

The Contract shall be governed by and construed in accordance with the laws in force in India. The Parties hereby submit to the exclusive jurisdiction of the Courts situated at Andhra Pradesh for adjudication of disputes, injunctive reliefs, actions and proceedings, if any, arising out of this Contract.

45 <u>DISPUTES BETWEEN CPSE'S/GOVERNMENT DEPARTMENT'S/ORGANIZATIONS</u>

Subject to conciliation as provided above, in the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts inter se and also between CPSEs and Government Departments /Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in OPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018.

Any party aggrieved with the decision of the Committee at the First level (tier) may prefer an appeal before the Cabinet Secretary at the Second level (tier) within 15 days from the date of receipt of decision of the Committee at First level, through it's administrative Ministry/Department, whose decision will be final and binding on all concerned.

The above provisions mentioned at clause no.44 & 45 shall supersede provisions relating to Conciliation, Arbitration, Governing Law & Jurisdiction and Disputes between CPSE's/ Government Department's/ Organizations mentioned in General Conditions of Contract (GCC) and elsewhere in tender document.

46 <u>INAM-PRO (PLATFORM FOR INFRASTRUCTURE AND MATERIALS</u> PROVIDERS)

INAM-Pro (Platform for infrastructure and materials providers) is a web based platform for infrastructure provides and materials suppliers and was developed by Ministry of Road Transport and Highways (MoRT&H) with a view to reduce project execution delays on account of supply shortages and inspire greater confidence in contractors to procure cement to start with directly from the manufacturers. Presently, numerous cement companies are registered in the portal and offering cement for sale on the portal with a commitment period of 3 years. These companies have bound themselves by ceiling rates for the entire commitment period, wherein they are allowed to reduce or increase their cement rates any number of times within the ceiling rate, but are not permitted to exceed the said ceiling rate.

MoRT&H is expanding the reach of this web-portal by increasing both the product width as well as the product depth. They are working on incorporating 60 plus product categories. The product range will span from large machineries like Earth Movers and Concrete Mixers, to even the smallest items like road studs. MoRT&H intend to turn it into a portal which services every infrastructure development related need of a modern contractor.

GGPL's contractors may use this innovative platform, wherever applicable. The usage of web – Portal is a completely voluntary exercise. The platform, however, can serve



as a benchmark for comparison of offered prices and products.

47 PROMOTION OF PAYMENT THROUGH CARDS AND DIGITAL MEANS

To promote cashless transactions, the onward payments by Contractors to their employees, service providers, sub-contractors and suppliers may be made through Cards and Digital means to the extent possible

48 CONTRACTOR TO ENGAGE CONTRACT MANPOWER BELONGING TO SCHEDULED CASTES AND WEAKER SECTIONS OF THE SOCIETY

While engaging the contractual manpower, Contractors are required to make efforts to provide opportunity of employment to the people belonging to Scheduled Castes and weaker sections of the society also in order to have a fair representation of these sections.

49 QUARTERLY CLOSURE OF THE CONTRACT [FOR APPLICABILITY OF THIS CLAUSE REFER BDS]:-

During execution of contracts/orders, various issues may arise. In order to timely detect and to address the contractual issue (s) during the execution of contracts, GGPL has introduced a mechanism of quarterly closure of the contract, under which all the issues related to the contract execution will be monitored on quarterly basis for resolution. Vendors/Contractors are required to co-operate with EIC for proper implementation of this mechanism for smooth execution of the contract."

50 PROVISIONS FOR STARTPUS (AS DEFINED IN GAZETTE NOTIFICATION NO. D.L-33004/99 DATED 18.02.2016 AND 23.05.2017 OF MINISTRY OF COMMERCE AND INDUSTRY AND AS AMENDED FROM TIME TO TIME) [FOR APPLICABLITY REFER BDS]

As mentioned in Section-II, Prior turnover and prior experience shall not be required for all Startups [whether Micro & Small Enterprises (MSEs) or otherwise] subject to their meeting the quality and technical specifications specified in tender document. Further, the Startups are also exempted from submission of EMDs.

For availing the relaxation, bidder is required to submit requisite certificate towards Startup enterprise registration issued by Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry and the certificate should be certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) and notary public with legible stamp. The relaxation of prior experience and prior turnover to Startups [whether Micro & Small Enterprises (MSEs) or otherwise] is to be given to the specific goods/ job domains wherein they are registered for.

For availing the relaxation, bidder is required to submit requisite certificate towards Startup enterprise registration issued by Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry and relaxation is to be given to the specific goods / jobs domain wherein they are registered for.



Wherever the "Certificate of Recognition" is stipulating the domain of startup, the domain of startup is be considered based "Certificate of Recognition" issued by Department of Promotion of Industry and Internal Trade (DPIIT). Startups having the "Certificate of Recognition" which do not mention Domain, in such case startups are also required to submit the documents for the same including the application submitted to DPIIT.

Further, above document should also be certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) and notary public with legible stamp.

If a Startup [whether Micro & Small Enterprises (MSEs) or otherwise] gets qualified without turnover and experience criteria specified in tender and emerges lowest bidder, the order on such Startup shall be placed for entire tendered quantity/group/item/part wise as stated in tender.

If a Startup emerge lowest bidder, the LOA on such Startup shall be placed for entire tendered quantity/group/item/part (as the case may be). However, during the Kick of Meeting monthly milestones/ check points would be drawn. Further, the performance of such contractor/ service provider will be reviewed more carefully and action to be taken as per provision of contract in case of failure/ poor performance.

51 PROVISION REGARDING INVOICE FOR REDUCED VALUE OR CREDIT NOTE TOWARDS PRS

As mentioned in GCC, PRS is the reduction in the consideration / contract value for the goods / services covered under this contract. In case of delay in supply/ execution of contract, supplier/ contractor/ service provider should raise invoice for reduced value as per Price Reduction Schedule Clause (PRS clause). If supplier/ contractor/ service provider has raised the invoice for full value, then supplier/ contractor/ service provider should issue Credit Note towards the applicable PRS amount with applicable taxes.

In such cases if supplier/ contractor/ service provider fails to submit the invoice with reduced value or does not issue credit note as mentioned above, GGPL will release the payment to supplier/ contractor/ service provider after giving effect of the PRS clause with corresponding reduction of taxes charged on vendor's invoice, to avoid delay in delivery/collection of material."

In case any financial implication arises on GGPL due to issuance of invoice without reduction in price or non-issuance of Credit Note, the same shall be to the account of supplier/contractor/service provider. GGPL shall be entitled to deduct/setoff/recover such GST amount (CGST & SGST/UTGST or IGST) together with penalties and interest, if any, against any amounts paid or becomes payable by GGPL in future to the Supplier/Contractor under this contract or under any other contract.

52 <u>UNIQUE DOCUMENT IDENTIFICATION NUMBER BY PRACTICING</u> CHARTERED ACCOUNTANTS

Practicing Chartered Accountants shall generate Unique Document Identification Number (UDIN) for all certificates issued by them as per provisions of Tender Document.

However, UDIN may not be required for documents being attested by Chartered



Accountants in terms of provisions of Tender Document.

A. Eligibility criteria in case bid is submitted on the basis of technical experience of FOREIGN BASED ANOTHER COMPANY (SUPPORTING COMPANY) which holds more than fifty percent of the paid up share capital of the bidder company or vice versa:

Offers of those bidders (not under consortium arrangement) who themselves do not meet the technical experience criteria as stipulated in the BEC and are quoting based on the experience of Foreign based another company (Supporting Company) can also be considered. In such case the supporting company should hold more than fifty percent of the paid up share capital of the bidding company or vice versa.

However, the supporting company should on its own meet the technical experience as stipulated in the BEC and should not rely on any other company or through any other arrangement like Technical collaboration agreement.

In that case as the bidding company is dependent upon the technical experience of another company with a view to ensure commitment and involvement of the companies involved for successful execution of the contract, the participating bidder should enclose the following Agreements/ Guarantees/ Undertakings along with the technocommercial bid:

- (i) An Agreement (as per format enclosed at Appendix- A1 to Section III) between the bidder and the supporting company.
- (ii) Guarantee (as per format enclosed at Appendix- A2 to Section III) by the supporting company to GGPL for fulfilling the obligation under the Agreement along with certificate issued by Company Secretary as per Appendix- A2A to Section III.

B. PROCUREMENT FROM A BIDDER WHICH SHARES A LAND BORDER WITH INDIA

- 1. Order (Public Procurement No. 1) dated 23.07.2020, Order (Public Procurement No. 2) dated 23.07.2020 and Order (Public Procurement No. 3) dated 24.07.2020, Department of Expenditure, Ministry of Finance, Govt. of India refers. The same are available at website https://doe.gov.in/procurement-policy-divisions.
- 2. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. For details of competent authority refer to Annexure I of Order (Public Procurement No. 1) dated 23.07.2020.

Further the above will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the



Ministry of External Affairs, Govt. of India

- 3. "Bidder" (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) for purpose of this provision means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.
- **4.** "Bidder from a country which shares a land border with India" for the purpose of this:
 - a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- **5.** "Beneficial owner" for the purpose of above (4) will be as under:
 - i. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

Explanation—

- a) "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;
- b) "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholder's agreements or voting agreements;
- ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
- iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
- iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
- v) In case of a trust, the identification of beneficial owner(s) shall include



identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

6. "Agent" for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons.

7. SUBMISSION OF CERTIFICATE IN BIDS:

Bidder shall submit a certificate in this regard as Form-I to Section-III. If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate rejection of the bid/termination and further action as per "Procedure for Action in case of Corrupt/Fraudulent/ Collusive / Coercive Practices" of tender document.

8. The registration, wherever applicable, should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

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	V



Form-I to Section III

UNDERTAKING ON LETTERHEAD

	avari Gas Private Limited nendravaram			
SUB:				
TENDER	NO:			
Dear Sir				
	land border with India,	ng Provisions for Procurements we certify that, bidder M/s		
(i)	Not from such a country	y	[]
(ii)	If from such a country, with the Competent Au (Evidence of valid regis Competent Authority sh	thority. stration by the]]
(B	idder is to tick approprie	ate option (\checkmark or X) above).		
		M/s (Name eligible to be considered as		
Place: Date:		[Signature of Authorized S Name: Designation: Seal:	Signatory of I	Bidder]





Appendix-A1 to Section III

FORMAT OF AGREEMENT TO BE EXECUTED BETWEEN BIDDER AND THEIR FOREIGN BASED SUPPORTING COMPANY ON INDIAN NON-JUDICIAL STAMP PAPER OF REQUISITE VALUE DULY NOTARIZED.

This agreement made this day of month year by and between M/s (Fill in Bidder's full name, constitution and registered office address)
hereinafter referred to as bidder on the first part and M/s (Fill in full name, constitution and registered office address company which hold more than fifty percent of the paid up share capital of the bidding company or vice versa) hereinafter referred to as "Supporting Company" of the second part.
Whereas
M/s. Godavari Gas Pvt. Limited (hereinafter referred to as GGPL) has invited offers vide their tender No for and M/s (Bidder) intends to bid against the said tender and desires to have technical support of M/s [Supporting Company]
And whereas Supporting Company represents that they have gone through and understood the requirements of the subject tender and are capable and committed to provide the services as required by the bidder for successful execution of the contract, if awarded to the bidder.
Now, it is hereby agreed to by and between the parties as follows:
a) M/s (Bidder) will submit an offer to GGPL for the full scope of work as envisaged in the tender document as a main bidder and liaise GGPL directly for any clarifications etc. in this context.
b) M/s [Supporting Company] undertakes to provide technical support and expertise, expert manpower and project management including financial support, if so required, to the bidder to discharge its obligations as per the Scope of Work of the tender / Contract for which offer has been made by the bidder and accepted the GGPL.
c) The Bidder/ Supporting Company holds more than 50% paid up equity capital of the Supporting Company/ Bidder.
d) This agreement will remain valid till validity of bidder's offer to GGPL including extension if any and till satisfactory performance of the contract, the same is awarded by GGPL to the bidder.
e) <u>Supporting Company</u> undertakes that this agreement shall remain enforceable even if their stake in Bidder is diminished during the execution of works under the contract between the Bidder and GGPL.

f)

The bidder shall have the overall responsibility of satisfactory execution of the

contract awarded by GGPL, however without prejudice to any rights that GGPL might



have against the Supporting Company

g) It is further agreed that, if contract pursuant to Supporting Company shall be jointly and severely responsible to GGPL for the performance of works during contract period and for the satisfactory execution of the contract, and for all the consequences for non-performance thereof.

In witness whereof the parties hereto have executed this agreement on the date mentioned above.

For and on behalf of (Bidder)	For and on behalf of (Supporting Company)
M/s.	M/s.
Witness:	Witness:
1)	1)
2)	2)



Appendix-A2 to Section III

GUARANTEE BY THE FOREIGN BASED SUPPORTING COMPANY/ GUARANTOR

THIS DEED OF GUARANTEE executed at this day of by M/s

(to be executed on plain paper)

FOR
M/s
TOWARDS
M/s GGPL, a company duly registered under the law of India having its Registered Office at 85-6- 23/2, RTC Complex Road, Near Morampudi Junction, Rajahmundry, Andhra Pradesh, India, and having Purchase center at hereinafter called "GGPL" which expression shall unless excluded by or repugnant to the context thereof, be deemed to include its successor and assignees
WHEREAS GGPL has invited tender number
AND WHEREAS the bidder/ Guarantor Company holds more than 50% paid up equity capital of the Supporting Company/ Bidder .
AND WHEREAS one of the condition for acceptance of Bidder's bid against said tender is that in case the bidder is seeking to qualify upon the technical credentials of its Guarantor Company, then the bidder shall arrange a guarantee from its Guarantor Company guaranteeing due and satisfactory performance of the work covered under the said tender including any change therein as may be deemed appropriate by the GGPL at any stage.

The Bidder and the Guarantor have entered into an agreement dated as per which the Guarantor shall be providing technical, financial and such other supports as may be necessary for performance of the work under the tender, if the contract is awarded to the Bidder.

supports as may be required by the Bidder for successful execution of the same.

The Guarantor represents that they have gone through and understood the requirement of the above said tender and are capable of and committed to provide technical and such other

Accordingly, at the request of the Bidder and in consideration of and as a requirement for the GGPL to enter into agreement(s) with the Bidder, the Guarantor hereby guarantees and undertakes that upon award of Contract to Bidder against bid number, made by



Tender No.; **GGPL/C&P/SR 1000013/2022-23/07** the Bidder under tender number.....

- 1. The Guarantor unconditionally agrees that in case of non-performance by the Bidder of any of its obligations in any respect, the Guarantor shall, immediately on receipt of notice of demand by the GGPL, take up the job without any demur or objection, in continuation and without loss of time and without any cost to the GGPL and duly perform the obligations of the Bidder to the satisfaction of the GGPL.
- 2. The Guarantor agrees that the Guarantee contained herein shall remain valid till the satisfactory execution and completion of the work (including discharge of the warranty obligations) awarded to the Bidder.
- 3. The Guarantor shall be jointly and severally responsible to GGPL for satisfactory performance of works during contract period and for the satisfactory execution of the contract, and for all consequences for non-performance thereof.
- 4. The liability of the Guarantor, under the Guarantee, is limited of the Bidder for non- performance under the contract entered between GGPL and the Bidder. This will, however, be in addition to the forfeiture of the Performance and Advance Guarantees furnished by the Bidder.
- 5. The Guarantor agrees to execute a Corporate Guarantee in favour of GGPL, guaranteeing the performance of obligations by the Bidder, in case the Contract is awarded to the Bidder by GGPL.
- 6. The Guarantor represents that this Guarantee has been issued after due observance of the appropriate laws in force in India. The Guarantor hereby undertakes that the Guarantor shall obtain and maintain in full force and effect all the governmental and other approvals and consents that are necessary and do all other acts and things necessary or desirable in connection therewith or for the due performance of the Guarantor's obligations towards GGPL.
- 7. Any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration. It is further agreed that Claims by and against the Guarantor, the Bidder and GGPL under the different contract to be entered pursuant to their relationship can be brought under a single reference and there shall be no bar on the consolidation of such proceedings before the same arbitral tribunal. The governing law shall be the laws of India and seat of arbitration shall be Andhra Pradesh. The language of arbitration shall be English.
- 8. The Guarantor hereby declares and represents that this Guarantee has been given without any undue influence or coercion, and that the Guarantor has fully understood the implications of the same.
- 9. In case of award of contract to the bidder, the Guarantor shall provide Performance Bank Security to GGPL, equivalent to 50% of the value of Performance Bank Security to be submitted by the bidding company, in the prescribed format within 15 days from the date of Fax of Acceptance, as guarantee for performance by the bidder/Supplier. The Guarantor hereby expressly agrees that if in the opinion of GGPL, the Bidder / Supplier has failed to perform its obligations under the contract in any manner, GGPL shall have unfettered right to invoke the said Bank guarantee. The guarantor hereby agrees that decision of GGPL about performance of the bidder / Supplier shall be final and shall not be questioned by the Guarantor. Guarantor shall have no objection to invocation of the Performance Bank Guarantee submitted by the Guarantor



OR

(applicable, subject to meeting the conditions stipulated in BEC in respect of additional Performance Bank Security)

In case of award of contract to the bidder, the bidder on behalf of the Guarantor shall provide additional Performance Bank Security to GGPL, equivalent to 50% of the value of Performance Bank Security to be submitted by the bidding company, in the prescribed format within 15 days from the date of Fax of Acceptance, as guarantee for performance by the bidder/Supplier. The Guarantor hereby expressly agrees that if in the opinion of GGPL, the Bidder / Supplier has failed to perform its obligations under the contract in any manner, GGPL shall have unfettered right to invoke the said Bank guarantee. The Guarantor hereby agrees that decision of GGPL about performance of the bidder / Supplier shall be final and shall not be questioned by the Guarantor. Guarantor shall have no objection to invocation of the Performance Bank Security submitted by the Bidder on behalf The Guarantor represents and confirms that the Guarantor has the legal capacity, power and authority to issue this Guarantee and that giving of this Guarantee and the performance and observations of the obligations hereunder do not contravene any existing laws.

(Strike through the clause whichever is not applicable)

10. The Guarantor represents and confirms that the Guarantor has the legal capacity, power and authority to issue this Guarantee and that giving of this Guarantee and the performance and observations of the obligations hereunder do not contravene any existing laws.

	For & on behalf of (Supporting Company) M/s
	Signature
	Name
	Designation
	official seal
Witness:	
1.Signature	
Full Name	
Address	
2.Signature	
Full Name	
Address	

INSTRUCTIONS FOR FURNISHING GUARANTEE

- 1. The official(s) executing the guarantee should affix full signature(s) on each page.
- 2. Resolution passed by Board of Directors of the guaranter company authorizing the signatory(ies) to execute the guarantee, duly certified by Company Secretary should be furnished along with Guarantee.



Appendix-A2A to Section III

CERTIFICATE ISSUED BY COMPANY SECRETARY OF THE GUARANTOR COMPANY

"Obligations contained in deed of guarantee No	furnished against tender No.
are enforceable against the Guarantor Company	and the same do not, in any
way, contravene any law of the country of which the subject."	Guarantor Company is the
	_

The above certificate should be enclosed along with the Guarantee.





Annexure-I

PROCEDURE FOR ACTION IN CASE CORRUPT/FRAUDULENT/COLLUSIVE/COERCIVE PRACTICES

The Owner requires that Bidders/Contractors observe the highest standard of ethics during the execution of Contract. In pursuance of this policy, the Owner defines, for the purposes of this provision, the terms set forth below as follows:

A Definitions:

- A.1 "Corrupt Practice" means the offering, giving, receiving or soliciting, directly or indirectly, anything of value to improperly influence the actions in selection process or in contract execution.
 - "Corrupt Practice" also includes any omission for misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided.
- A2 "Fraudulent Practice" means and include any act or omission committed by a agency or with his connivance or by his agent by misrepresenting/ submitting false documents and/ or false information or concealment of facts or to deceive in order to influence a selection process or during execution of contract/ order.
- A3 "Collusive Practice amongst bidders (prior to or after bid submission)" means a scheme or arrangement designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- A.4 "Coercive practice" means impairing or harming or threatening to impair or harm directly or indirectly, any agency or its property to influence the improperly actions of an agency, obstruction of any investigation or auditing of a procurement process.
- A.5 "Vendor/Supplier/Contractor/Consultant/Bidder" is herein after referred as "Agency"
- A.6 "Appellate Authority" shall mean Committee of Directors consisting of Director (Finance) and Director (BD) for works centers under Director (Projects). For all other cases committee of Directors shall consist of Director (Finance) & Director (Projects).
- A.7 "Competent Authority" shall mean the authority, who is competent to take final decision for Suspension of business dealing with an Agency/ (ies) and Banning of business dealings with Agency/ (ies) and shall be the "Director" concerned.
- A.8 "Allied Agency" shall mean all the concerns within the sphere of effective influence of banned/ suspended agencies. In determining this, the following factors may be taken into consideration:
- (a) Whether the management is common;
- (b) Majority interest in the management is held by the partners or directors of banned/ suspended firm.



- (c) substantial or majority shares are owned by banned/ suspended agency and by virtue of this it has a controlling voice.
- A.9 "Investigating Agency" shall mean any department or unit of GAIL investigating into the conduct of Agency/ party and shall include the Vigilance Department of the GAIL, Central Bureau of Investigation, State Police or any other agency set up by the Central or state government having power to investigate.

B Actions against bidder(s) indulging in corrupt /fraudulent/ collusive/ coercive practice

B.1 Irregularities noticed during the evaluation of the bids :

If it is observed during bidding process/ bids evaluation stage that a bidder has indulged in corrupt/fraudulent/collusive/coercive practice, the bid of such Bidder (s) shall be rejected and its Earnest Money Deposit (EMD) shall be forfeited.

Further, such agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2 Irregularities noticed after award of contract

(i) During execution of contract:

If an agency, is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, during execution of contract, the agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

The concerned order (s)/ contract(s) where corrupt/fraudulent/collusive practices is observed, shall be suspended with immediate effect by Engineer-in-Charge (EIC)/ Employer whereby the supply/ work/ service and payment etc. will be suspended. The action shall be initiated for putting the agency on banning.

After conclusion of process, the order (s)/ contract (s) where it is concluded that such irregularities have been committed shall be terminated and Contract cum Performance Bank Guarantee (CPBG)/ Contract Performance Security(CPS) submitted by agency against such order (s)/ contract (s) shall also be forfeited. The amount that may have become due to the contractor on account of work already executed by him shall be payable to the contractor and this amount shall be subject to adjustment against any amounts due from the contractor under the terms of the contract.

No risk and cost provision will be enforced in such cases.

(ii) After execution of contract and during Defect liability period (DLP)/ Warranty/Guarantee Period:



If an agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after execution of contract and during DLP/Warranty/Guarantee Period, the agency shall be banned for future business with GAIL for a period specified in para B 2.2 below from the date of issue of banning order.

Further, the Contract cum Performance Bank Guarantee (CPBG)/Contract Performance Security (CPS) submitted by agency against such order (s)/ contract (s) shall be forfeited.

(iii) After expiry of Defect liability period (DLP)/ Warranty/Guarantee Period

If an agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after expiry of Defect liability period (DLP)/ Warranty/Guarantee Period, the agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2.2 Period of Banning

Banning period shall be reckoned from the date of banning order and shall be 3 years.

In exceptional cases where the act of vendor/ contractor is a threat to the National Security, the banning shall be for indefinite period.

C Effect of banning on other ongoing contracts/ tenders

- C.1 If an agency is put on Banning, such agency should not be considered in ongoing tenders/future tenders.
- C.2 However, if such an agency is already executing other order (s)/ contract (s) where no corrupt/fraudulent/ collusive/coercive practice is found, the agency should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract.
- C.3 If an agency is put on the Banning List during tendering and no irregularity is found in the case under process:
- C.3.1 after issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the agency shall be ignored.
- C.3.2after opening Technical bid but before opening the Price bid, the Price bid of the agency shall not be opened and BG/EMD submitted by the agency shall be returned to the agency.
- C.3.3after opening of price, BG/EMD made by the agency shall be returned; the offer of the agency shall be ignored & will not be further evaluated. If the agency is put on banning list for fraud/ mis-appropriation of facts committed in the same tender/other tender where errant agency emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.

D. Procedure for Suspension of Bidder

D.1 Initiation of Suspension



- Action for suspension business dealing with any agency/(ies) shall be initiated by Corporate C&P Department when
- (i) Corporate Vigilance Department based on the fact of the case gathered during investigation by them recommend for specific immediate action against the agency.
- (ii) Corporate Vigilance Department based on the input from Investigating agency, forward for specific immediate action against the agency.
- (iii) Nonperformance of Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order.

D.2 Suspension Procedure:

- D.2.1 The order of suspension would operate initially for a period not more than six months and is to be communicated to the agency and also to Corporate Vigilance Department. Period of suspension can be extended with the approval of the Competent Authority by one month at a time with a ceiling of six months pending a conclusive decision to put the agency on banning list.
- D.2.2 During the period of suspension, no new business dealing may be held with the agency.
- D.2.3 Period of suspension shall be accounted for in the final order passed for banning of business with the agency.
- D.2.4 The decision regarding suspension of business dealings should also be communicated to the agency.
- D.2.5 If a prima-facie, case is made out that the agency is guilty on the grounds which can result in banning of business dealings, proposal for issuance of suspension order and show cause notice shall be put up to the Competent Authority. The suspension order and show cause notice must include that
- (i) the agency is put on suspension list and (ii) why action should not be taken for banning the agency for future business from GAIL.
 - The competent authority to approve the suspension will be same as that for according approval for banning.

D 3 Effect of Suspension of business:

Effect of suspension on other on-going/future tenders will be as under:

- D.3.1 No enquiry/bid/tender shall be entertained from an agency as long as the name of agency appears in the Suspension List.
- D.3.2 If an agency is put on the Suspension List during tendering:
- D.3.2.1 after issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the agency shall be ignored.



- D.3.2.2 after opening Technical bid but before opening the Price bid, the Price bid of the agency shall not be opened and BG/EMD submitted by the agency shall be returned to the agency.
- D.3.2.3 after opening of price, BG/EMD made by the agency shall be returned; the offer of the agency shall be ignored & will not be further evaluated. If the agency is put on Suspension list for fraud/ mis-appropriation of facts conducted in the same tender/other tender where errant agency emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.
- D.3.3 The existing contract (s)/ order (s) under execution shall continue.
- D.3.4 Tenders invited for procurement of goods, works and services shall have provision that the bidder shall submit an undertaking to the effect that (i) neither the bidder themselves nor their allied agency/(ies) are on banning list of GAIL or the Ministry of Petroleum and Natural Gas and (ii) bidder is not banned by any Government department/ Public Sector.

F. Appeal against the Decision of the Competent Authority:

- F.1 The agency may file an appeal against the order of the Competent Authority for putting the agency on banning list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the of receipt of banning order.
- F.2 Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- F.3 Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- **G.** Wherever there is contradiction with respect to terms of "Integrity pact", GCC and "Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice", the provisions of "Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice" shall prevail.





Annexure-II

PROCEDURE FOR EVALUATION OF PERFORMANCE OF VENDORS/SUPPLIERS/ CONTRACTORS/ CONSULTANTS

1.0 **GENERAL**

A system for evaluation of Vendors/ Suppliers/Contractors/ Consultants and their performance is a key process and important to support an effective purchasing & contracting function of an organization.

Performance of all participating Vendors/ Suppliers/Contractors/ Consultants need to be closely monitored to ensure timely receipt of supplies from a Vendor, completion of an assignment by a Consultant or complete execution of order by a contractor within scheduled completion period. For timely execution of projects and meeting the operation & maintenance requirement of operating plants, it is necessary to monitor the execution of order or contracts right from the award stage to completion stage and take corrective measures in time.

2.0 **OBJECTIVE**

The objective of Evaluation of Performance aims to recognize, and develop reliable Vendors/ Suppliers/Contractors/ Consultants so that they consistently meet or exceed expectations and requirements.

The purpose of this procedure is to put in place a system to monitor performance of Vendors/ Suppliers/Contractors/ Consultants associated with GGPL in Projects and in O&M so as to ensure timely completion of various projects, timely receipt of supplies including completion of works & services for operation and maintenance of operating plants and quality standards in all respects.

2.0 METHODOLOGY

i) Preparation of Performance Rating Data Sheet

Performance rating data Sheet for each and every Vendor/ Supplier/Contractor/ Consultant for all orders/Contracts with a value of Rs. 7 Lakhs and above is recommended to be drawn up. These data sheets are to be separately prepared for orders/ contracts related to Projects and O&M. Format, Parameters, Process, responsibility for preparation of Performance Rating Data Sheet are separately mentioned.

ii) Measurement of Performance

Based on the parameters defined in Data Sheet, Performance of concerned Vendor/ Supplier/Contractor/ Consultant would be computed and graded accordingly. The measurement of the performance of the Party would be its ability to achieve the minimum scoring of 60% points in the given parameters.

iii) Initiation of Measures:



Depending upon the Grading of Performance, corrective measures would be initiated by taking up the matter with concerned Vendor/ Supplier/Contractor/ Consultant. Response of Vendor/ Supplier/Contractor/ Consultant would be considered before deciding further course of action.

iv) <u>Implementation of Corrective Measures:</u>

Based on the response of Vendor/ Supplier/Contractor/ Consultant, concerned Engineer-in-Charge for the Projects and/or OIC in case of O&M would recommend for continuation or discontinuation of such party from the business of GGPL.

v) Orders/contracts placed on Proprietary/OEM basis for O&M will be evaluated and, if required, corrective action will be taken for improvement in future.

3.0 PROCESS OF EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS

3.1 FOR PROJECTS

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of PROJECTS shall be done immediately with commissioning of any Project.
- ii) On commissioning of any Project, EIC (Engineer-in-charge)/ Project-in- charge shall prepare a Performance Rating Data Sheet (Format at Annexure-1) for all Orders and Contracts.
- iii) Depending upon the Performance Rating, following action need to be initiated by Engineer-in-charge/Project-in-charge:

Sl.No.	Performance	Action
	Rating	
1	POOR	Seek explanation for Poor
		performance
2	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving
		performance in future
4	VERY GOOD	No further action

- iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where Performance rating is "POOR":

Recommend such defaulting Vendor/ Supplier/Contractor/ Consultant for putting on Holiday for a period from one to three years as given below:



- (i) Poor Performance due to reasons other than Quality: **One Year**
- (ii) Poor Performance on account of Quality (if any mark obtained against Quality parameter is less than 30): **Two Years**
- (iii) Poor Performance leading to termination of contract or Offloading of contract due to poor performance solely attributable to Vendor/ Supplier/Contractor/ Consultant or Repeated Offence: Three Years

Nonperformance of a Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order, such Vendor/ Supplier/ Contractor/Consultant are also to be considered for Suspension.

In all such cases, concerned site will put up recommendation for issuance of SCN and putting the party on suspension list as per process defined for suspension in "Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices"

(B) Where Performance rating is "FAIR":

Recommend for issuance of warning to such defaulting Vendor/Supplier/Contractor/ Consultant to improve their performance.

3.2 FOR CONSULTANCY JOBS

Monitoring and Evaluation of consultancy jobs will be carried out in the same way as described in para 3.1 for Projects.

3.3 FOR OPERATION & MAINTENANCE

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of Operation and Maintenance shall be done immediately after execution of order/contract.
- ii) After execution of orders a Performance Rating Data Sheet (Format at Annexure-2) shall be prepared for Orders by Site C&P and for Contracts/Services by respective Engineer-In-Charge.
- iii) Depending upon Performance Rating, following action need to be initiated by Site C&P:

Sl. No.	Performance	Action		
	Rating			
1	POOR	Seek explanation performance	for	Poor
2.	FAIR	Seek explanation performance	for	Fair



3	GOOD	Letter	to	the	concerned	for
		improvi	ng pe	rforma	ince in future.	
4	VERY GOOD	No furth	ner ac	tion		

iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet

to be closed with a letter to the concerned for improving performance in future.

- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:
- A) Where performance rating is "POOR"

Recommend such defaulting Vendor/Supplier/Contractor/ Consultant for putting on Holiday for a period from one to three years as given below:

- (i) Poor Performance due to reasons other than Quality: One Year
- (ii) Poor Performance on account of Quality (if any mark obtained against Quality parameter is less than 30): **Two Years**
- (iv) Poor Performance leading to termination of contract or Offloading of contract due to poor performance solely attributable to Vendor/Supplier/Contractor/Consultant or Repeated Offence: **Three Years**

Non-performance of a Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order such Vendor/ Supplier/ Contractor/Consultant are also to be considered for Suspension.

In all such cases, concerned site will put up recommendation for issuance of SCN and putting the party on suspension list as per process defined for suspension in "Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices"

(B) Where Performance rating is "FAIR"

Recommend for issuance of warning to such defaulting Vendors/Contractors/Consultants to improve their performance.

4.0 EXCLUSIONS:

The following would be excluded from the scope of evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants:

- i) Orders/Contracts below the value of Rs. 7 Lakhs.
- ii) One time Vendor/ Supplier/Contractor/ Consultant.
- iii) Orders for Misc./Administrative items/ Non stock Non valuated items.

However, concerned Engineer-in-Charge /OICs will continue to monitor such cases so as to minimize the impact on Projects/O&M plants due to non



performance of Vendors/ Suppliers/Contractors/ Consultants in all such cases.

5.0 REVIEW & RESTORATION OF PARITES PUT ON HOLIDAY

5.1 An order for Holiday passed for a certain specified period shall deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation.

Further, in case Vendor/ Supplier/Contractor/ Consultant is put on holiday due to quality, and new order is placed on bidder after restoration of Vendor/ Supplier/Contractor/ Consultant, such order will be properly monitored during execution stage by the concerned site.

6.0 EFFECT OF HOLIDAY

- **6.1** If a Vendor/ Supplier/Contractor/ Consultant is put on Holiday, such Vendor/ Supplier/Contractor/ Consultant should not be considered in ongoing tender's/future tenders.
- 6.2 However, if such Vendor/ Supplier/Contractor/ Consultant is already executing any other order/ contract and their performance is satisfactory in terms of the relevant contract, should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract. In such a case CPBG will not be forfeited and payment will be made as per provisions of concerned contract. However, this would be without prejudice to other terms and conditions of the contract.
- 6.3. Effect on other ongoing tendering:
- 6.3.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the party shall be ignored.
- 6.3.2 after opening Technical bid but before opening the Price bid, the Price bid of the party shall not be opened and BG/EMD submitted by the party shall be returned to the party.
- 6.3.3 after opening of price, BG/EMD made by the party shall be returned; the offer of the party shall be ignored & will not be further evaluated. If errant party emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.
- 7.0 While putting the Vendor/ Supplier/Contractor/ Consultant on holiday as per the procedure, the holding company, subsidiary, joint venture, sister concerns, group division of the errant Vendor/ Supplier/Contractor/ Consultant shall not be considered for putting on holiday list.

Any bidder, put on holiday, will not be allowed to bid through consortium route also in new tender during the period of holiday.





8.0 If an unsuccessful bidder makes any vexatious, frivolous or malicious complaint against the tender process with the intention of delaying or defeating any procurement or causing loss to GAIL or any other bidder, such bidder will be put on holiday for a period of six months, if such complaint is proved to be vexatious, frivolous or malicious, after following the due procedure.

9. <u>APPEAL AGAINST THE DECISION OF THE COMPETENT AUTHORITY:</u>

- (a) The party may file an appeal against the order of the Competent Authority for putting the party on Holiday list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the of receipt of Holiday order.
- (b) Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- (c) Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- (d) "Appellate Authority" shall mean Committee of Directors consisting of Director (Finance) and Director (BD) for works centers under Director (Projects). For all other cases committee of Directors shall consist of Director (Finance) & Director (Projects).

10. ERRANT BIDDER

In case after price bid opening the lowest evaluated bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, GGPL shall forfeit EMD paid by the bidder and such bidders shall be debarred from participation in re-tendering of the same job(s)/item(s).

Further, such bidder will be put on holiday for a period of six months after following the due procedure.

11. In case GST department brings to the notice of GGPL that a Party has not paid to the credit of the Government the GST collected from GGPL, then party will be put on holiday for a period of six months after following the due procedure.



Annexure-1

GGPL PERFORMANCE RATING DATA SHEET (FOR PROJECTS/ CONSULTANCY JOBS)

i) Project/Work Centre :

ii) Order/ Contract No. & date :

iii) Brief description of Items :

Works/Assignment

iv) Order/Contract value (Rs.) :

v) Name of Vendor/Supplier/ :

Contractor/ Consultant

vi) Contracted delivery/ :

Completion Schedule

vii) Actual delivery/ :

Completion date

Performance	Delivery/	Quality	Reliability	Total
Parameter	Completion Performance	Performance	Performance#	
Maximum Marks	40	40	20	100
Marks Allocated				

Note:

Remarks (if any)

PERFORMANCE RATING (**)

Note:

- (#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the subvendor/sub-contractor due to financial constraints, then "0" marks should be allotted against Reliability Performance.
- (*) Allocation of marks should be as per enclosed instructions (**) Performance rating shall be classified as under:

S1.	Range (Marks)	Rating
No.		
1	60 & below	POOR
2	61-75	FAIR
3	76-90	GOOD
4	More than 90	VERY
		GOOD

Signature of Authorised Signatory:

Name:

Designation:



Instructions for allocation of marks

1. Marks are to be allocated as under:

1.1	DELIVERY/ COM	MPLETION PERFORM	MANCE 4	0
Deli	very Period/		Delay in Weeks Marks Completion Schedul	le
" " "	Upto 3 months ay upto 4 weeks 8 weeks 10 weeks 12 weeks 16 weeks	Before CDD	30 25 20 15	35 0
,, ,, ,, Mor	Above 3 months ay upto 4 weeks 8 weeks 10 weeks 16 weeks 20 weeks 24 weeks re than 24 weeks	ORMANCE	30 25 20 15 10	40 35 0
1.2 For	QUALITY PERF Marks Normal Cases: No 1 0 marks	ORMANCE Defects/ No Deviation/ N	o failure:	40
Pro- ii) syste	rata basis for accept When quality Moderate nature em integration marks and safety o	Failure of severe nature 5 marks	n 10 marks ed to total Quantity for normal e 0 marks failure endanger - low severe nature 10	-
devi	Number of ations marks o. of deviations > 2 marks	1. No deviation	5 marks 2. No. of deviations ≤	2 2 0



1.3 RELIABILITY PERFORMANCE Marks

20

Α.	FOR WORKS/CONTRACTS	
	i)Submission of order acceptance, agreement, PBG, Drawings and other documents within time	
	ii) Mobilization of resources as per Contract and in time	4 marks
i	ii)Liquidation of Check-list points	4 marks
i	v)Compliance to statutory and HS&E requirements	4 marks
	or	
	Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	
	v) Timely submission of estimates and other documents for Extra, Substituted & AHR items	
В.	FOR SUPPLIES	
	i)Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
	ii)Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	
i	ii)Response to various correspondence and conformance to standards like ISO	5 marks
i	v)Submission of all required documents including Test Certificates at the time of supply	5 marks



Annexure-2

GGPL PERFORMANCE RATING DATA SHEET (FOR O&M)

i) Location:

ii) Order/ Contract No. & date :

iii) Brief description of Items :

Works/Assignment

iv) Order / Contract value (Rs.) :

v) Name of Vendor/Supplier/ :

Contractor/ Consultant

vi) Contract delivery/ :

Completion Schedule

vii) Actual delivery/ : Completion date

Performance	Delivery	Quality	Reliability	Total
Parameter	Performance	Performance	Performance#	
Maximum Marks	40	40	20	100
Marks Allocated				
(*)				

Remarks (if any)

PERFORMANCE RATING (**)

Note:

- (#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the subvendor/sub-contractor due to financial constraints, then "0" marks should be allotted against Reliability Performance
- (*) Allocation of marks should be as per enclosed instructions (**) Performance rating shall be classified as under:

S1.	Range (Marks)	Rating	Signature of
No.			Authorised
1	60 & below	POOR	Signatory:
2	61-75	FAIR	
3	76-90	GOOD	Name: Designation:
4	More than 90	VERY	
		GOOD	



Instructions for allocation of marks (For O&M)

1. Marks are to be allocated as under:

1.1 DELIVERY/ COMPLETION PERFORMANCE Marks 40

Delivery Period/		Delay in Weeks Marks Completion Schedule	
a) Upto 3 months Delay upto 4 weeks "8 weeks "10 weeks "12 weeks "16 weeks More than 16 weeks	Before CDD	30 25 20 15	35 0
b) Above 3 months Delay upto 4 weeks " 8 weeks " 10 weeks " 16 weeks " 20 weeks " 24 weeks More than 24 weeks 1.2 QUALITY PERIMARKS	Before CDD FORMANCE	30 25 20 15 10	0
For Normal Cases : No 0 marks	Defects/ No Deviation/	No failure:	4
prorata basis for accept	Failure of severe natur - Moderate nature	d to total quantity for normal cases e 0 marks failure endanger 5 marks)-25
system iii) Number of deviations marks 3. No. of deviations > 2 marks	1. No deviation	5 marks 2. No. of deviations ≤ 2	2



1.3 RELIABILITY PERFORMANCE

20 Marks

Α.	FOR WORKS/CONTRACTS	
	i)Submission of order acceptance, agreement, PBG, Drawings and other documents within time	
	ii) Mobilization of resources as per Contract and in time	4 marks
	iii)Liquidation of Check-list points	4 marks
	iv)Compliance to statutory and HS&E requirements	4 marks
	or	
	Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	
	v) Timely submission of estimates and other documents for Extra, Substituted & AHR items	
В.	FOR SUPPLIES	
	i)Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
	ii) Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	
	iii)Response to various correspondence and conformance to standards like ISO	5 marks
	iv)Submission of all required documents including Test Certificates at the time of supply	5 marks



ANNEXURE-IV

BIDDING DATA SHEET (BDS) ITB TO BE READ IN CONJUNCTION WITH THE FOLLOWING:

A. GENERAL		
ITB clause	Description	
1.2	The Invitation for Bids/ Tender no is : _ GGPL/C&P/SR 1000013/2022-23/07	
1.1	The Employer/Owner is: Godavari Gas Private Limited	
2.1	The name of the Works/Services to be performed is: HIRING OF CONTRACT FOR CIVIL AND ELECTRICAL WORKS FOR CGS FACILITY AT BHIMADOLE	
3	BIDS FROM CONSORTIUM/JOINT VENTURE : NOT APPLICABLE	
5.2.1	Demand Draft/ Banker's Cheque towards Tender EMD (if applicable) shall be in favour of Godavari Gas Private Limited payable at Rajamahendravaram, Andhra Pradesh	
	B. BIDDING DOCUMENT	
ITB clause	Description	
8.1	For <u>clarification purposes</u> only, the communication address is: Attention: RK Potla, DGM (BD, HR & C&P) Street Address: # 101 & 102, 1 st Floor, Ocean Park, Beach Road, Maharanipeta City: Visakhapatnam, Andhra Pradesh. ZIP Code: 530002 Country: India Email: <u>rkpotla@gail.co.in</u> ;	
	C. PREPARATION OF BIDS	
ITB clause	Description	
11.1.1 (u)	The Bidder shall submit with its Techno-commercial/ Un priced bid the following additional documents (SCC Refers): Indemnity Bond Integrity Pact Power of attorney	



Fender No : GGP	L/C&P/SR 1000013/2022-23/07
12	Additional Provision for Schedule of Rate/ Bid Price are as under: NIL
12. & 13	Whether GGPL will be able to avail input tax credit in the instant tender: Currently NO
14	The currency of the Bid shall be INR
15	The bid validity period shall be 3 Months from final 'Bid Due Date'.
16.1	In case of submission through online banking transaction i.e. IMPS / NEFT / RTGS / SWIFT, etc, the details of GGPL's Bank account are as under: Canara Bank, Hyderabad Industrial Finance Branch, A/C No. 2423201000324, IFSC Code: CNRB0002423
	Bidder to mention reference no. "CPS/" in narration while remitting the CPS amount in GGPL's Bank Account.
	D. SUBMISSION AND OPENING OF BIDS
ITB clause	Description
18	In addition to the original of the Bid, the number of copies required is one.
22	The E-Tender No. of this bidding process is: Not Applicable
22.3 and 4.0 of IFB	For <u>bid submission purposes</u> only (Manual) or the submission of physical document as per clause no. 4.0 of IFB, the Owner's address is: Attention: RK Potla, DGM (BD, HR & C&P) Street Address: # 101 & 102, 1st Floor, Ocean Park, Beach Road, Maharanipeta City: Visakhapatnam, Andhra Pradesh. ZIP Code: 530002 Country: India Email: rkpotla@gail.co.in; jayasree.d@apgdc.com;
26	The bid opening shall take place at: Andhra Pradesh Gas Distribution Corporation

Attention: RK Potla, DGM (BD, HR & C&P) Street Address: # 101 & 102, 1st Floor, Ocean Park, Beach Road,

Maharanipeta

City: Visakhapatnam, Andhra Pradesh.

ZIP Code: 530002 Country: India

Email: rkpotla@gail.co.in; jayasree.d@apgdc.com;

Date &Time: As mentioned above.



	E. EVALUATION, AND COMPARISON OF BIDS
ITB clause	Description
32	Evaluation Methodology is mentioned in Section-II.
33	Compensation for Extended Stay: NOT APPLICABLE
	F. AWARD OF CONTRACT
ITB clause	Description
37	State of which stamp paper is required for Contract Agreement: Andhra Pradesh
38	Contract Performance Security/ Security Deposit: 3% of Contract Value Excl. Taxes & Duties within 30 days of award
40	Whether tendered item is non-splitable or not-divisible : YES
41	Provision of AHR Item: APPLICABLE
Clause no. 27.3 of GCC	Bonus for Early Completion: NOT APPLICABLE
40	Applicability of provisions relating to Public Procurement policy for Micro and Small : APPLICABLE
50	Applicability of provisions relating to Startups: NOT APPLICABLE



SECTION: IV

FORMS & FORMAT



LIST OF FORMS & FORMAT

Form No.	Description
F-1	BIDDER'S GENERAL INFORMATION
F-2	BID FORM
F-3	LIST OF ENCLOSURES
F-4	PROFORMA OF "BANK GUARANTEE" FOR "EARNEST MONEY / BID SECURITY"
F-4A	PROFORMA OF "LETTER OF CREDIT" FOR "EARNEST MONEY / BID SECURITY"
F-5	LETTER OF AUTHORITY
F-6	NO DEVIATION CONFIRMATION
F-7	DECLARATION REGARDING HOLIDAY/BANNING AND LIQUIDATION, COURT RECEIVERSHIP ETC.
F-8	CERTIFICATE FOR NON-INVOLVMENT OF GOVT. OF INDIA
F-9	PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT"
F-10	AGREED TERMS & CONDITIONS
F-11	ACKNOWLEDGEMENT CUM CONSENT LETTER
F-12	UNDERTAKING ON LETTERHEAD
F-13	BIDDER'S EXPERIENCE
F-14	CHECK LIST
F-15	FORMAT FOR CERTIFICATE FROM BANK
	IF BIDDER'S WORKING CAPITAL IS INADEQUATE
F-16	FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE FOR FINANCIAL CAPABILITY OF THE BIDDER
F-17	FORMAT FOR CONSORTIUM/JV AGREEMENT
F-18	BIDDER'S QUERIES FOR PRE BID MEETING
F-19	E-BANKING FORMAT
F-20	INTEGRITY PACT
F-21	INDEMNITY BOND



<u>F-1</u>

BIDDER'S GENERAL INFORMATION

To, M/s Godavari Gas Private Limited Rajahmahendravaram

TENDER NO:



1	Bidder Name	
2	Status of Firm	Proprietorship Firm/Partnership firm/
		Limited/Others
		If Others Specify:
		[Enclose certificate of Registration]
3	Name of Proprietor /Partners/	
	Directors of the firm/company	
4	Number of Years in Operation	
5	Address of Registered Office:	
	*In case of Partnership firm,	City:
	enclose letter mentioning current	District:
		State:
	address of the firm and the full	PIN/ZIP:
	names and current addresses of all	
	the partners of the firm.	
	Operation Address	
6	(if different from above)	City:
		District:
		State:
		PIN/ZIP:
8	Telephone Number	
Ü	Telephone Tyumeer	(Country Code) (Area Code)
		(Telephone No.)
9	E-mail address	(Telephone 1701)
10	Website	
11	Fax Number:	
		(Country Code) (Area Code)
		(Telephone No.)
12	ISO Certification, if any	{If yes, please furnish details}
13	Bid Currency	
14	Banker's Name	
15	Branch	
17	Bank account number	
18	PAN No.	
10		[Enclose copy of PAN Card]



19	GST no.	
		[Enclose copy of GST Registration Certificate]
20	EPF Registration No.	
		[Enclose copy of EPF Registration Certificate
21	ESI code No.	
		[Enclose copy of relevant document]
22	We (Bidder) are cover under the definition of section 2 (n) of the	Yes / No (If the response to the above is 'Yes'', Bidder
	MSMED Act	to provide Purchaser a copy of the Enterpreneurs Memorandum (EM) filled with
		the authority specified by the respective State Government.)
23	Whether Micro/Small/Medium	(Bidder to submit documents as specified it
	Enterprise	ITB)
24	Type of Entity	Corporate/ Non-Corporate (As per Service
		tax Act).
		(In case of Non-Corporate Entity, bidder
		will submit documentary evidence for
		same).

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:



<u>F-2</u>

BID FORM

To,
M/s Godavari Gas Private Limited Rajahmahendravaram
SUB: TENDER NO:
Dear Sir, After examining / reviewing the Bidding Documents for the tender of including
"Specifications & Scope of Work", "General Conditions of Contract [GCC]", "Special Conditions of Contract [SCC]" and "Schedule of Rates [SOR]", etc. the receipt of which is hereby duly acknowledged, we, the undersigned, are pleased to offer to execute the whole part of the job and in conformity with the said Bid Documents, including Addenda / Corrigenda Nos
We confirm that this Bid is valid for a period as specified in BDS from the date of opening of "Techno-Commercial / Un-priced Bid", and it shall remain binding upon us and may be accepted by any time before the expiry of that period.
If our Bid is accepted, we will provide the "Contract Performance Security / Security Deposit" equal to " of the Contract Price" or as mentioned in Tender Document for the due performance within "thirty [30] days" of such Award.
Until a final Agreement/Letter of Award is prepared and executed, the tender document (including addenda/ corrigenda) together with the "Notification of Award" shall constitute a binding Agreement between us.
We understand that Bidding Document is not exhaustive and any action and activity not mentioned in Bidding Documents but may be inferred to be included to meet the intend of the Bidding Documents shall be deemed to be mentioned in Bidding Documents unless otherwise specifically excluded and we confirm to perform for fulfillment of Agreement and completeness of the Work in all respects within the time frame and agreed price.
We understand that you are not bound to accept the lowest priced or any Bid that you may receive.
Place: [Signature of Authorized Signatory of Bidder] Name: Designation: Seal:



F-3 LIST OF ENCLOSURES

To.

M/s Godavari Gas Private Limited Rajahmahendravaram

SUB:

TENDER NO:

Dear Sir,

We are enclosing the following documents as part of the bid:

- 1. Power of Attorney of the signatory to the Bidding Document.
- 2. Document showing annual turnover for the last three years such as annual reports, profit and loss account, net worth etc. along with information as sought in enclosed format F-16
- 3. Document showing Financial Situation Information as sought in enclosed format F-16
- 4. Copy of Bidding Documents along with addendum/corrigendum duly signed and sealed on each page, in token of confirmation that Bid Documents are considered in full while preparing the bid and in case of award, work will be executed in accordance with the provisions detailed in Bid Documents.
- 5. Documentary Evidences showing the Bidder's claim of meeting Technical Criteria as mentioned in Clause 4 of ITB.
- 6. Bid Security/EMD*
- 7. Tender Fee*
- 8. Integrity Pact*
- 9. Power of Attorney*
- 10. Duly certified document from chartered engineer and or chartered accountant.

Note:

* In case of e-bidding the bidder has the option to submit specified documents in physical form on/before the bid due date or within seven days from the bid opening date. However, scanned copy of these (same) documents must be submitted on-line as part of e-bid before the bid due date/time.

Place:	[Signature of Authorized Signatory of Bidder]
D /	NI

Date: Name:

Designation:

Seal:



FORMAT F-4 PROFORMA OF "BANK GUARANTEE" FOR "EARNEST MONEY / BID SECURITY"

(To be stamped in accordance with the Stamp Act)

Ref	Bank Guarantee No	•••
To, M/s Godavari Gas Private D. No.: 85-06-23/2,2nd Fl 40th Ward, Morumpudi Ju Rajamahendravaram – 53: East Godavari Dist, Andh	Limited loor, Above Happy Home Furniture Shop, unction, 3103	
SUB: TENDER NO:		
Dear Sir(s), In accordance with Letter Ir having called the Tenderer), wish to said tender for		M/s (hereinafte
is require	Guarantee against Earnest Money for the d to be submitted by the Tenderer as a condition der which amount is liable to be forfeited on the ed in the Tender Document.	precedent for
immediately on demand with Limited, the amount protest, demur and recourse	Bank athaving our (Local Address) guarantee and under ithout any recourse to the tenderers by Godavar without an e. Any such demand made by GGPL, shall be coff any dispute or difference raised by the Tendere	ertake to pay ri Gas Private ry reservation, onclusive and
should be two (02) months guarantee is required, the s	vocable and shall remain valid up to beyond the validity of the bid]. If any further extended same shall be extended to such required period whose behalf this guarante	tension of this on receiving
	k, through its authorized officer, has set its hand 20 at	and stamp on
WITNESS:		
(SIGNATURE) (NAME)	(SIGNATU (NAME) Designation with I	,
(OFFICIAL ADDRESS)	Attorney as per	•



Power of Attorney No	_
Date:	

INSTRUCTIONS FOR FURNISHING "BID SECURITY / EARNEST MONEY" BY "BANK GUARANTEE"

- 1. The Bank Guarantee by Bidders will be given on non-judicial stamp paper as per "Stamp Duty" applicable. The non-judicial stamp paper should be in the name of the issuing Bank. In case of foreign Bank, the said Bank's Guarantee to be issued by its correspondent Bank in India on requisite non-judicial stamp paper
- 2. The expiry date should be arrived at in accordance with "ITB: Clause-15.1".
- **3.** The Bank Guarantee by bidders will be given from Bank as specified in "ITB".
- 4. A letter from the issuing Bank of the requisite Bank Guarantee confirming that said Bank Guarantee / all future communication relating to the Bank Guarantee shall be forwarded to the Employer at its address as mentioned at "ITB".
- 5. Bidders must indicate the full postal address of the Bank along with the Bank's E-mail / Fax / Phone from where the Earnest Money Bond has been issued.
- 6. If a Bank Guarantee is issued by a commercial Bank, then a letter to Employer confirming its net worth is more than Rs. 1,000,000,000.00 [Rupees One Hundred Crores] or equivalent along with documentary evidence.



F-4A PROFORMA OF "LETTER OF CREDIT" FOR "EARNEST MONEY / BID SECURITY"

To,

M/s Godavari Gas Private Limited D. No.: 85-06-23/2,2nd Floor, Above Happy Home Furniture Shop, 40th Ward, Morumpudi Junction, Rajamahendravaram – 533103 Fast Godavari Dist, Andhra Pradesh

Rajamahendravaram – 533	103
East Godavari Dist, Andhra	Pradesh
SUB:	
TENDER NO:	
Irrevocable and confir	med Letter of Credit No Amount: Rs.
Validity of this Irrevoca	able: (in India)
Letter of Credit	(2 months beyond validity of Offer)
Dear Sir,	
1. You are here b	by authorized to draw on (Name of
Applicant/Bidder	with full address) for a sum not exceeding
available by your	demand letter (draft) on them at sight drawn for Rs
• •	certificate by Godavari Gas Private Limited, with the Tender
1	rated therein, that one or more of the following conditions
• •	
nas/nave occurred	l, specifying the occurred condition(s):

- (i) The Bidder withdraws its Bid during the period of Bid validity or any extension thereof duly agreed by the Bidder.
- (ii) The Bidder varies or modifies its Bid in a manner not acceptable to *Godavari Gas Private Limited* during the period of bid validity or any extension thereof duly agreed by the Bidder.
- (iii) The Bidder, having been notified of the acceptance of its Bids,
 - (a) Fails or refuses to execute the Supply Order/Contract
 - (b) Fails or refuses to furnish the Contract Performance Security within 30 days before expiry of Bid Security.
 - (c) Fails to accept arithmetic corrections as per tender conditions.
- (iv) The Bidder defaults w.r.t. any terms & conditions of Tender Document which call for forfeiture of Earnest Money Deposit (EMD).
- 3. We hereby guarantee to protect the Drawers, Endorsers and bonafide holders



from any consequences, which may arise in the event of the non-acceptance or non-payment of Demand Letter (draft) in accordance with the terms of this credit.

- 4. This Credit is issued subject to the Uniform Customs and Practices for Documentary Credits (1993 Revised) International Chamber of Commerce brochure No. 500.
- 5. Please obtain reimbursement as under:

J.	i lease obtain remoursement as under
6.	All foreign as well as Indian bank charges will be on the account of M/s.
	(Applicant/Bidder)
	FOR

Authorized Signature (Original Bank)

Counter Signature



F-5 LETTER OF AUTHORITY

[Pro forma for Letter of Authority for Attending Subsequent 'Negotiations' / 'Pre-Bid Meetings' /'Un-priced Bid Opening' / 'Price Bid Opening']

Date:
hereby authorize the following y 'Negotiations' / 'Meetings [Pre-Bid Meeting]', 'Un-Opening' and for any subsequent correspondence / Bidding Documents:
Signature
Signature
ound by all commitments made by aforementioned
[Signature of Authorized Signatory of Bidder] Name: Designation: Seal:

Note: This "Letter of Authority" should be on the <u>"letterhead"</u> of the Firm / Bidder and should be signed by a person competent and having the 'Power of Attorney' to bind the Bidder. Not more than 'two [02] persons per Bidder' are permitted to attend "Techno-commercial / Un-priced" & "Price Bid" Openings. Bidders authorized representative is required to carry a copy of this authority letter while attending the un-priced and priced bid opening, the same shall be submitted to Godavari Gas Private Limited.



"NO DEVIATION" CONFIRMATION

П	
	\cap
J	L O.

M/s Godavari Gas Private Limited Rajahmahendravaram

SUB:

TENDER NO:

Dear Sir,

We understand that any 'deviation / exception' in any form may result in rejection of Bid. We, therefore, certify that we have not taken any 'exception / deviation' anywhere in the Bid and we agree that if any 'deviation / exception' is mentioned or noticed, our Bid may be rejected.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:

 $\underline{F-7}$ DECLARATION REGARDING HOLIDAY/BANNING AND LIQUIDATION,



Tender No.: GGPL/C&P/SR 1000013/2022-23/07 COURT RECEIVERSHIP

\sim
I ().

M/s Godavari Gas Private Limited Rajahmahendravaram

SUB:

TENDER NO:

Dear Sir,

We hereby confirm that we are not on 'Holiday' by GGPL/GAIL or Public Sector Project Management Consultant (like EIL, Mecon only due to "poor performance" or "corrupt and fraudulent practices") or banned by Government department/ Public Sector on due date of submission of bid.

Further, we confirm that neither we nor our allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of GAIL or the Ministry of Petroleum and Natural Gas.

We also confirm that we are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'.

In case it comes to the notice of GGPL that the bidder has given wrong declaration in this regard, the same shall be dealt as 'fraudulent practices' and action shall be initiated as per the Procedure for action in case of Corrupt/Fraudulent/Collusive/Coercive Practices.

Further, we also confirm that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to GGPL by us.

Place:	Signature of A	Authorized S	Signatory o	of Bidder	l

Date: Name:

Designation:

Seal:



<u>F-8</u> CERTIFICATE FOR NON-INVOLVMENT OF GOVT. OF INDIA

То,	
M/s Godavari Gas Private Limite	d
Rajahmahendravaram	

SUB: TENDER NO:

Dear Sir,

If we become a successful Bidder and pursuant to the provisions of the Bidding Documents, award is given to us for the tender for ",the following

Certificate shall be automatically enforceable:

"We agree and acknowledge that the Employer is entering into the Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood & agreed that the Government of India is not a party to the Agreement and has no liabilities, obligations or rights thereunder. It is expressly understood and agreed that the Employer is authorized to enter into Agreement, solely on its own behalf under the applicable laws of India. We expressly agree, acknowledge and understand that the Employer is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Agreement. Accordingly, we hereby expressly waive, release and forego any and all actions or claims, including cross claims, VIP claims or counter claims against the Government of India arising out of the Agreement and covenants not to sue to Government of India as to any manner, claim, cause of action or things whatsoever arising of or under the Agreement."

Place: [Signature of Authorized Signatory of Bidder]
Date: Name:

Designation:

Seal:



F-9

PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT" (ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

	Godavari Gas Private Limited mahendravaram
Dear	· Sir(s),
expre been	having registered office(herein after called the "contractor/supplier" which ession shall wherever the context so require include its successors and assignees) have placed/ awarded the job/work of vide PO/LOA /FOA No for Godavari Gas Private Limited
havir "GGl	dated for Godavari Gas Private Limited ng registered office at(herein after called the PL" which expression shall wherever the context so require include its successors and nees).
Rs Contr Contr Bank	Contract conditions provide that the SUPPLIER/CONTRACTOR shall pay a sum of
	request and in consideration of the premises we having our office at have agreed to give such guarantee as hereinafter mentioned.
1.	We
2.	You will have the full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the order/contract with the said M/s and to enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said



	M/s and such postponement forbearance would
	not have the effect of releasing the bank from its obligation under this debt.
3.	Your right to recover the said sum of Rs
	and/or that any dispute or disputes are pending before any officer, tribunal or court or arbitrator or any other authority/forum and any demand made by you in the bank shall be conclusive and binding. The bank shall not be released of its obligations under these presents by any exercise by you of its liberty with reference to matter aforesaid or any of their or by reason or any other act of omission or commission on your part or any other indulgence shown by you or by any other matter or changed what so ever which under law would, but for this provision, have the effect of releasing the bank.
4.	The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said supplier/contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
5.	This guarantee shall be irrevocable and shall remain valid upto (this date should be 90 days after the expiry of defect liability period/ Guarantee period) The bank undertakes not to revoke this guarantee during its currency without your previous consent and further agrees that the guarantee shall continue to be enforceable until it is discharged by GGPL in writing. However, if for any reason, the supplier/contractor is unable to complete the supply/work within the period stipulated in the order/contract and in case of extension of the date of delivery/completion resulting extension of defect liability period/guarantee period of the supplier/contractor fails to perform the supply/work fully, the bank hereby agrees to further extend this guarantee at the instance of the supplier/contractor till such time as may be determined by GGPL. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instruction from M/s (contractor) on whose behalf this guarantee is issued.
6.	Bank also agrees that GGPL at its option shall be entitled to enforce this Guarantee against the bank (as principal debtor) in the first instant, without proceeding against the supplier/contractor and notwithstanding any security or other guarantee that GGPL may have in relation to the supplier's/contractor's liabilities.
7.	The amount under the Bank Guarantee is payable forthwith without any delay by Bank upon the written demand raised by GGPL. Any dispute arising out of



or in relation to the said Bank Guarantee shall be subject to the exclusive jurisdiction of courts at Andhra Pradesh.

- 8. Therefore, we hereby affirm that we are guarantors and responsible to you on behalf of the Supplier/Contractor up to a total amount of _______(amount of guarantees in words and figures) and we undertake to pay you, upon your first written demand declaring the Supplier/Contractor to be in default under the order/contract and without caveat or argument, any sum or sums within the limits of (amounts of guarantee) as aforesaid, without your needing to prove or show grounds or reasons for your demand or the sum specified therein.
- 9. We have power to issue this guarantee in your favor under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney, dated _____ granted to him by the Bank.

	Yours faithfully,
Bank by its Co	onstituted Attorney

Signature of a person duly Authorized to sign on behalf of the Bank

INSTRUCTIONS FOR FURNISHING "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT" BY "BANK GUARANTEE"

- 1. The Bank Guarantee by successful Bidder(s) will be given on non-judicial stamp paper as per 'stamp duty' applicable. The non-judicial stamp paper should be in name of the issuing bank. In case of foreign bank, the said Bank Guarantee to be issued by its correspondent bank in India on requisite non-judicial stamp paper and place of Bid to be considered as Rajahmundry.
- 2. The Bank Guarantee by Bidders will be given from bank as specified in Tender.
- 3. A letter from the issuing bank of the requisite Bank Guarantee confirming that said Bank Guarantee and all future communication relating to the Bank Guarantee shall be forwarded to Employer.
- 4. If a Bank Guarantee is issued by a commercial bank, then a letter to Employer and copy to Consultant (if applicable) confirming its net worth is more than Rs. 100,00,00,000.00 [Rupees One Hundred Crores] or its equivalent in foreign currency alongwith documentary evidence.



$\frac{\text{F-10}}{\text{AGREED TERMS \& CONDITIONS}}$

To M/s Godavari Gas Private Limited Rajahmahendravaram

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
1	Bidder's name and address	
2.	Please confirm the currency of quoted prices is in Indian Rupees.	
3.	Confirm quoted prices will remain firm and fixed till complete execution of the order.	
4	Rate of applicable GST	CGST:% SGST:% IGST:% Total:%
4.1	Whether in the instant tender GST is covered in reverse charge rule of Goods and service tax	Yes/ No In case of Yes, please specify GST) payable by: GGPL:% Bidder:%
5.	i) Confirm acceptance of relevant Terms of Payment specified in the Bid Document.ii) In case of delay, the bills shall be submitted after deducting the price reduction due to delay.	
6.	Confirm that Contract Performance Security will be furnished as per Bid Document.	
7.	Confirm that Contract Performance Security shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case of bank guarantees from banks other than the Nationalised Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores and a declaration to this effect shall be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.	
8.	Confirm compliance to Completion Schedule as specified in Bid document. Confirm contract period shall be reckoned from the date of Fax of Acceptance.	
9.	Confirm acceptance of Price Reduction Schedule for delay in completion schedule specified in Bid document.	
10.	a) Confirm acceptance of all terms and conditions of Bid Document (all sections).	



	b) Confirm that printed terms and conditions of bidder are not applicable.	
11.	Confirm your offer is valid for period specified in BDS from Final/Extended due date of opening of Techno-commercial Bids.	
12.	Please furnish EMD/Bid Security details: a) EMD/ Bid Security No. & date b) Value c) Validity	
13.	Confirm acceptance to all provisions of ITB read in conjunction with Bid Data Sheet (BDS).	
14.	Confirm that Annual Reports for the last three financial years are furnished along with the Un-priced Bid.	
15.	Confirm that, in case of contradiction between the confirmations provided in this format and terms & conditions mentioned elsewhere in the offer, the confirmations given in this format shall prevail.	
16.	Confirm the none of Directors of bidder is a relative of any Director of Owner or the bidder is a firm in which any Director of Owner/ GGPL or his relative is a partner.	
17.	All correspondence must be in ENGLISH language only.	
18.	Owner reserves the right to make any change in the terms & conditions of the TENDER/BIDDING DOCUMENT and to reject any or all bids.	
19.	Confirm that all Bank charges associated with Bidder's Bank shall be borne by Bidder.	

Place:	[Signature of Authorized Signatory of Bidder]
Date:	Name:
	Decignation:

Designation:

Seal:



ACKNOWLEDGEMENT CUM CONSENT LETTER

(On receipt of tender document/information regarding the tender, Bidder shall acknowledge the receipt and confirm his intention to bid or reason for non-participation against the enquiry /tender through e-mail/fax to concerned executive in GGPL issued the tender, by filling up the Format)

То,					
	M/s Godavari Gas Private Limited Rajahmahendravaram				
	·, eby acknowledge receij	ot of a complete set of bidding document along with and/or the information regarding the subject tender.			
• We intend to bid as requested for the subject item/job and furnish follow details with respect to our quoting office:					
P	ostal Address with Pin	Code :			
T	elephone Number	:			
	ax Number	:			
C	Contact Person	·			
_	-mail Address	:			
	Mobile No.	:			
	Pate	:			
	eal/Stamp	:			
 We are unable to bid for the reason given below: Reasons for non-submission of bid: 					
Agency		:			
Signature		:			
Name		:			
Designa	tion	:			
Date		:			
Seal/Stamp		:			



To,	
M/s Godavari Gas Private Limited Rajahmahendravaram	
SUB: TENDER NO:	
Dear Sir	
Name of the bidder with complete	The contents of this Tender Document No. not been modified or altered by M/s
Place: Date:	[Signature of Authorized Signatory of Bidder] Name: Designation: Seal:



To,

M/s Godavari Gas Private Limited Rajahmahendravaram

SUB:

TENDER NO:

Sl. No	Descript ion of the Services	LOA /WO No. and date	Full Postal Address & phone nos. of Client. Name, designation and address of Engineer/	Value of Contract /Order (Specify Currency Amount)	Commenc ement of Services	Scheduled Completio n Time (Mo nths)	Date of Actual Comple tion	Reasons for delay in executio n, if any
			Officer-in- Charge (for cases other than purchase)					
(1)	(2)	(3)	(5)	(6)	(7)	(8)	(9)	(10)

Place:	[Signature of Authorized Signatory of Bidder]
--------	---

Date: Name:

Designation:

Seal:



Bidders are requested to duly fill in the checklist. This checklist gives only certain important items to facilitate the bidder to make sure that the necessary data/information as called for in the bid document has been submitted by them along with their offer. This, however, does not relieve the bidder of his responsibilities to make sure that his offer is otherwise complete in all respects.

Please ensure compliance and tick ($\sqrt{}$) against following points:



S. No.	DESCRIPTION	CHECK BOX	REFERENCE PAGE NO. OF THE BID SUBMITTED
1.0	Digitally Signing (in case of e-bidding)/ Signing and Stamping (in case of maual bidding) on each sheet of offer, original bidding document including SCC, ITB, GCC ,SOR drawings, addendum (if any)		
2.0	Confirm that the following details have been submitted in the Un-priced part of the bid		
i	Covering Letter, Letter of Submission		
ii	Bid Security		
iii	Signed and stamped original copy of bidding document □ along with drawings and addendum (if any)		
iv	Power of Attorney in the name of person signing the bid.		
V	Copies of documents defining constitution or legal status, place of □ registration and principal place of business of the company		
vi	Bidders declaration that regarding, Holiday/ Banning, liquidation court receivership or similar proceedings		
vii	Details and documentary proof required against qualification criteria □ along with complete documents establishing ownership of □ equipment as per SCC are enclosed		
viii	Confirm submission of document along with unpriced bid as per bid requirement.		
3.0	Confirm that all forms duly filled in are enclosed with the bid duly signed by authorised person(s)		
4.0	Confirm that the price part as per Price Schedule format submitted with Bidding Document/ uploaded in case of e-bid.		
7.0	Confirm that annual reports for last three financial years & duly [filled in Form 16 are enclosed in the offer for financial assessment (where financial criteria of BEC is applicable).		



Place: Date:	[Signature of Authorized Signatory of Bidder] Name: Designation: Seal:



F-15

FORMAT FOR CERTIFICATE FROM BANK IF BIDDER'S WORKING CAPITAL IS INADEQUATE/NEGATIVE

(To be provided on Bank's letter head)

Date:	:
To, M/s Godavari Gas Private Limited Rajahmahendravaram	
Dear Sir,	
This is to certify that M/s	th
The Customer has informed that they wish to bid for GGPL's RFQ/Tender not dated	or y)
Accordingly M/s	
It is also confirmed that the net worth of the Bank is more than Rs. 100 Crores (c Equivalent USD) and the undersigned is authorized to issue this certificate.	or
Yours truly	
for (Name & address of Bank)	
(Authorized signatory) Name of the signatory : Designation : Stamp	



F-16

FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE/ CERTIFIED PUBLIC ACCOUNTANT (CPA) FOR FINANCIAL CAPABILITY OF THE BIDDER

We have verified the Audited Financial Statements and other relevant records of M/s..... (Name of the bidder) and certify the following:

A. AUDITED ANNUAL TURNOVER* OF LAST 3 YEARS:

Year	Amount (Currency)
Year 1: FY	
Year 2: FY	
Year 3: FY	

B. NETWORTH* AS PER LAST AUDITED FINANCIAL STATEMENT:

Description	Year FY
	Amount (Currency)
1. Net Worth	

C. WORKING CAPITAL* AS PER LAST AUDITED FINANCIAL STATEMENT:

Description	Year FY
	Amount (Currency)
1. Current Assets	
2. Current Liabilities	
3. Working Capital (Current	
Assets-Current liabilities)	

^{*}Refer Instructions

Note: It is further certified that the above mentioned applicable figures are matching with the returns filed with Registrar of Companies (ROC) [Applicable



Tender No.: GGPL/C&P/SR 1000013/2022-23/07 only in case of Indian Companies]

Name of Audit Firm: [Signature of Authorized Signatory]
Chartered Accountant/CPA Name:

Date: Designation:

Seal:

Membership No.:

Instructions:

- 1. The Separate Pro-forma shall be used for each member in case of JV/Consortium.
- 2. The financial year would be the same as one normally followed by the bidder for its Annual Report.
- 3. The bidder shall provide the audited annual financial statements as required for this Tender document. Failure to do so would result in the Proposal being considered as non-responsive.
- 4. For the purpose of this Tender document:
 - (i) **Annual Turnover** shall be "Revenue from Operations" as per Profit & Loss account of audited annual financial statements
 - (ii) Working Capital shall be "Current Assets less Current liabilities" and
 - (iii) **Net Worth** shall be Paid up share capital plus Free Reserves & Surplus less accumulated losses, deferred expenditure and miscellaneous expenditure not written off, if any.
- 5. Above figures shall be calculated after considering the qualification, if any, made by the statutory auditor on the audited financial statements of the bidder including quantified financial implication.
- 6. This certificate is to be submitted on the letter head of Chartered Accountant/CPA.



F-17

(TO BE INCLUDED ONLY WHERE CONSORTIUM/JV ARE ALLOWED)

FORMAT FOR CONSORTIUM/JV AGREEMENT (ON NON- JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

CONSORTIUM/JV AGREEMENT



F-18

BIDDER'S QUERIES FOR PRE BID MEETING

REFERENCE OF BIDDING DOCUMENT			BIDDER'S QUERY	GGPL'S REPLY	
SEC. NO.	Page No.	Clause No.	Subje ct		
				SEC. NO. Page No. Clause No. Subje	SEC. NO. Page No. Clause No. Subje

NOTE: The Pre-Bid Queries may be sent by fax and also by e-mail before due date for receipt of Bidder's queries.

SIGNATURE OF BIDDER:	: _	
NAME OF BIDDER	:	



E-Banking Mandate Form (To be issued on vendors letter head)

1. Vendor/customer Name :
2. Vendor/customer Code:
3. Vendor /customer Address:
4. Vendor/customer e-mail id:
 5. Particulars of bank account a) Name of Bank b) Name of branch c) Branch code: d) Address: e) Telephone number: f) Type of account (current/saving etc.) g) Account Number: h) RTGS IFSC code of the bank branch i) NEFT IFSC code of the bank branch j) 9 digit MICR code
I/We hereby authorize M/s Godavari Gas Private Limited to release any amount due to me/us in the bank account as mentioned above. I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, we would not hold the M/s Godavari Gas Private Limited responsible.
(Signature of vendor/customer)
BANK CERTIFICATE
We certify that has an Account no with us and we confirm that the details given above are correct as per our records. Bank stamp
Date (Signature of authorized officer of bank)



Tender No.: GGPL/C&P/SR 1000013/2022-23/07 F-20 INTEGRITY PACT

NOT APPLICABLE



F-21 INDEMNITY BOND

WHERE AS Godavari Gas Private Limited. (hereinafter referred to as "GGPL") which expression shall, unless repugnant to the context include its successors and assigns, having its registered office at D/NO: 85-6-23/2, 2nd Floor,RTC Complex Road, Near Morampudi Junction, Rajahmundry – 533107, East Godavari Dist., Andhra Pradesh has entered into a contract with M/s*..... (hereinafter referred to as the "Contractor") which expression shall unless repugnant to the context include its representatives, successors and assigns, having registered its *..... and on the terms and conditions as set out, inter-alia in the [mention the work order/LOA/Tender No. and various documents forming part thereof, hereinafter collectively referred to as the 'CONTRACT' which expression shall include all amendments, modifications and / or variations thereto.

GGPL has also advised the Contractor to execute an Indemnity Bond in general in favour of GGPL indemnifying GGPL and its employees and Directors including Independent Directors from all consequences which may arise out of any prospective litigation or proceedings filed or may be initiated by any third party, including any Banker / financial institution / worker(s) / vendor(s) / subcontractor(s) etc. who may have been associated or engaged by the Contractor directly or indirectly with or without consent of GGPL for above works.

NOW, THEREFORE, in consideration of the promises aforesaid, the Contractor hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified GGPL and all its employees, Directors, including Independent Directors, from and against all/any claim(s), damages, loss, which may arise out of any litigations/ liabilities that may be raised by the Contractor or any third party against GGPL under or in relation to this contract. The Contractor undertakes to compensate and pay to GGPL and/or any of its employees, Directors including Independent Directors, forth with on demand without any protest the amount claimed by GGPL for itself and for and on behalf of its employees, Directors including Independent Directors together with direct/indirect expenses including all legal expenses incurred by them or any of them on account of such litigation or proceedings.

AND THE CONTRACTOR hereby further agrees with GGPL that:

- (i) This Indemnity shall remain valid and irrevocable for all claims of GGPLL and/or any of its employees and Directors including Independent Directors arising out of said contract with respect to any such litigation / court case for which GGPL and/or its employees and Directors including Independent Directors has been made party until now or here-in-after.
- (ii) This Indemnity shall not be discharged/revoked by any change/modification/amendment/assignment of the contract or any merger of the Contractor with other entity or any change in the constitution/structure of the



2.

Contractor's firm/Company or any conditions thereof including insolvency etc. of the Contractor, but shall be in all respects and for all purposes binding and operative until any/all claims for payment of GGPL are settled by the Contractor and/or GGPL discharges the Contractor in writing from this Indemnity.

The undersigned has full power to execute this Indemnity Bond for and on behalf of the

Contractor and the same stands valid.
SIGNED BY:
For [Contractor]
Authorised Representative
Place:
Dated:
Witnesses: 1.



SECTION – V

GENERAL CONDITIONS OF CONTRACT



Sl. No.	Description
SECTION – I	DEFINITIONS & INTERPRETATIONS
1.1	Definition of Terms
1.2	Interpretations & Priority of Contract Documents
1.3	Special Conditions of Contract
SECTION – II	GENERAL INSTRUCTIONS & OBLIGATIONS
2.1	Formation of Contract
2.2	Signing of Agreement
2.3	Addenda/Corrigenda
2.4	Liability of Government of India
2.5	Site Visit
2.6	Action in case of Corrupt/Fraudulent /Collusive /Coercive Practices and Poor Performance
2.7	Retired Government or Employer's Officers
2.8	Conflict of Interest
2.9	Abnormal Rates
2.10	General obligations of Service Provider
2.11	Service Provider's Representative & Personnel
2.12	Service Provider's Employees / Personnel
2.13	Contract Performance Security
2.14	Failure by the Service Provider to comply with the provisions of the Contract
2.15	Service Provider remains liable to pay compensation if action not taken under clause 2.13
2.16	Change in constitution
2.17	Termination of Contract
2.18	Amount Payable in case of Termination
2.19	Members of the Employer Not Individually Liable
2.20	Employer not Bound by Personal Representations
2.21	Force Majeure
2.22	Price Reduction Schedule
2.23	Assignment/Sublet
2.24	Liens
2.25	Delays by Employer or his Authorised Representative
2.26	No waiver of rights
2.27	Certificate not to affect right of employer and liability of Service Provider
2.28	Language and Measures
2.29	Release of Information
2.30	Completion Period, Contract Period and Completion of Contract
2.31	Independent Capacity



2.32	Notice Notice
2.33	Confidentiality
2.34	Intellectual Property Right
SECTION – III	PERFORMANCE OF SERVICE
3.1	Execution of services
3.2	Changes In Services
3.3	Action and compensation in case of poor service
3.4	Suspension of services
3.5	Defects Liability Period
3.6	Completion Certificate
3.7	Final Decision & Final Certificate
3.8	Limitation of Liability
3.9	Indemnity
SECTION – IV	PAYMENT, INSURANCE AND TAXES
4.1	Deduction from the Contract price
4.2	Schedule of rates and payments
4.3	Procedure for Billing of Services
4.4	Notice of claims for additional payments
4.5	Insurance
4.6	Taxes and Duties
4.7	Income tax
4.8	Statutory variations
4.9	Damages to Property of any person and third party
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SECTION – I DEFINITIONS & INTERPRETATIONS

1.1 Definition of Terms:

In this Contract (as defined here-in-after), save where the context otherwise requires, the following words and expressions shall have the meanings respectively assigned to them:

"Approved" means approval in writing including subsequent written confirmation of previous verbal approval(s).

The "Bid /Tender/Offer" means the proposal along with required supporting documents submitted by the Bidder/Service Provider for consideration by the Employer.

The 'Bidder/Tenderer' means the person(s) / Firm / company / Corporation / Organization/entity, who participated in the Tender.

"Completion Certificate" means the certificate to be issued by the Engineer In-charge (EIC) when the Services have been completed entirely in accordance with Contract.

"Completion Date" means the date of actual completion of the services by the Service Provider as certified by the Employer.

"Contract" means an agreement between Employer and the Service Provider/Supplier for execution of the Service(s) as per Contract Documents and its subsequent amendment(s), if any in writing thereto.

"Contract Documents" means collectively the Tender Documents, Designs, Drawings, Scope of Services, Specifications, Schedule of Rates (SOR), Letter of Acceptance and agreed variations if any, and such other documents constituting the tender and acceptance thereof.

"Day" means a calendar day of 24 hours from midnight to midnight irrespective of the number of hours serviced in that day.

"Demobilization" means removal of all equipment, machinery, manpower from the site after completion of the services with the due permission of EIC.

"Drawings" means and include all Engineering sketches, general arrangements/ layout drawings, sectional plans, all elevations, etc. related to the Contract together with modification and revision thereto.

The "Employer/Service Receiver/ Company/Owner" means Godavari Gas Private Limited



(GGPL), a public limited company, incorporated under the Company's Act 1956 and having its Registered office at D/NO: 85-6-23/2, 2ND Floor,RTC Complex Road, Near Morampudi Junction, Rajahmundry – 533107 and includes its successors, assigns and Site(s)/work center(s).

The "Engineer-In-Charge" (EIC) means the person designated from time to time by Employer and shall include those who are expressly authorized by him to act for and on his behalf for operation/execution of this Contract for Services.

"Equipment/Materials/Goods" means and include all equipment, machinery, stores, goods which are required under the Contract for satisfactory performance of Services by the Service Provider.

"Fax of Acceptance" means intimation regarding notification of award by the Employer to the successful Bidder/Service Provider through a Fax/ Letter conveying that the Tender/Bid/Offer has been accepted in accordance with the provisions contained therein.

"Guarantee/Warranty/ Defect Liability Period (DLP)" means the period and other conditions governing the warranty/guarantee/defect liability period of the services as provided in the Contract.

"Metric System": All technical documents are given in the metric system and all service should be carried out according to the metric system. All documents concerning the service shall also be maintained in the metric system.

"Mobilization" means stabilizing adequate infrastructure at designated Site comprising of Equipment, aids, tools, tackles, instruments, Goods & Materials, experienced manpower, supported with supervising personal in order to provide services as per the provision of Contract document.

"Negligence" means any act or failure to act (whether sole, joint or concurrent) by a person or an entity which was intended to cause, or which was reckless disregard of or wanton indifference to, avoidable and harmful consequences such person or entity knew, or should have known, would result from such act or failure to act. Notwithstanding the foregoing, negligence shall not include any action taken in good faith for the safeguard of life or property.

The "Service(s)" means and include all services and activities/jobs to be performed by the Service Provider in pursuant to and in accordance with Contract or part thereof as the case may be and shall include all extra, additional, altered or substituted services and approvals from any agency/third party & license(s)/permissions from statutory authorities (if any), as required for purpose of the Contract.



The "Service Provider" means Bidder/Tenderer whose tender has been accepted by the Employer and includes the Service Provider's legal representative(s), his successor(s) and permitted assign(s).

"Service Provider's/Bidder's Representative" means such person(s) duly authorized by the Bidder/Service Provider in writing to the Employer as having authority to act for and on behalf the Bidder /Service Provider in matters affecting the Services and to provide the requisite services to Employer.

"Site" means the place(s) provided by the Employer where the Services are to be carried out/executed and any other place(s) as may be specifically designated in the Contract as forming part of the site.

"Specifications" means and include detailed description, statements to technical data, performance characteristics, and standards (Indian as well as International) as applicable and as specified in the Contract.

The "Sub-Service Provider" means any person / firm / Organization / company /entity (other than the Service Provider) and it's legal representatives, successors and permitted assigns named in the Contract as a Sub-Service Provider for a part of the Services or to whom a part of the Services has been sub-Contracted with the written prior consent of the Employer.

"Value of Contract" or "Total Contract Price" means the sum accepted or the sum calculated in accordance with the prices accepted in the Contract as payable to the Service Provider for the entire execution and full completion of the service, including Amendment(s) to Contract, if any.

"Week" means a period of any consecutive seven Days.

"Willful Misconduct" means intentional disregard of good and prudent standards of performance or proper conduct under the Contract with knowledge that it is likely to result in any injury to any person or loss or damage of property.

"Working Day" means any Day which is not declared by the Employer to be holiday or off-day.

1.2 INTERPRETATIONS & PRIORITY OF CONTRACT DOCUMENTS

- 1.2.1 The documents forming the Contract are to be read together and interpreted as mutually explanatory of one another. If there is a direct inconsistency in specific obligation(s), then for the purposes of interpretation, and unless otherwise provided in the Contract, the priority of the Contract Documents shall be in accordance with following sequence:
 - i) The Contract Agreement



- ii) Detailed Letter of Acceptance along with its enclosures
- iii) Fax of Acceptance
- iv) Scope of Works/ Job Specifications (specific to particular job only, wherever provided)
- v) Drawings
- vi) Special Conditions of Contract (SCC)
- vii) Technical Specifications (wherever applicable)
- viii) Instructions to Bidders (ITB)
- ix) General Conditions of Contract (GCC)
- x) Other Documents

Works shown in the Drawing but not mentioned in the Specifications or described in the Specifications without being shown in the Drawings shall nevertheless be deemed to be included in the same manner as if they had been specifically shown upon the Drawings and described in the Specifications.

Any amendment/change order issued by Employer upon signing of formal Contract shall take precedence over respective clauses of the formal Contract and its annexures.

The higher priority interpretation shall be adopted only to the extent required to deal with an inconsistency. Specific term(s) agreed take priority over general statement(s) and terms in Contract Document created at a later date govern over terms in earlier Contract Document. Subject to foregoing, the terms of the groups of documents set out above have equal importance within their group.

- 1.2.2 Headings and Marginal Notes: All headings and marginal notes to the clauses of these General Conditions of Contract or to the Specifications or to any other Tender Document are solely for the purpose of giving a concise indication and not a summary of the contents thereof, and they shall never be deemed to be part thereof or be used in the interpretation thereof the Contract.
- 1.2.3 Singular and Plural: In Contract Documents unless otherwise stated specifically, the singular shall include the plural and vice versa wherever the context so requires.
- 1.2.4 Gender: Where the context so requires, words imparting the masculine gender shall also include the feminine gender and the neuter gender and vice versa.
- 1.2.5 Severability: Should any provision of this Contract be found to be invalid, illegal or otherwise not enforceable by any court of law, such finding shall not affect the remaining provision(s)/clause(s) hereto and they shall remain binding on the parties hereto.

1.3 SPECIAL CONDITIONS OF CONTRACT:

1.3.1 Special Conditions of Contract consisting of scope of services, specification of Services &



items etc. shall be read in conjunction with the General Conditions of Contract, and any other documents forming part of this Contract wherever the context so requires.

- 1.3.2 Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each section/volume shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the Contract so far as it may be practicable to do so.
- 1.3.3 Where any portion of the General Condition of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears the provisions of the Special Conditions of Contract shall be deemed to over-ride the
 - provisions of the General Conditions of Contract and shall to the extent of such repugnancy, or variations, prevail.
- 1.3.4 Wherever it is mentioned in the Specifications that the Service Provider shall perform certain Service or provide certain facilities, it is understood that the Service Provider shall do so at his cost and the Value of Contract shall be deemed to have included cost of such performance and provisions, so mentioned.
- 1.3.5 The materials, design and services shall satisfy the relevant Standards, the Job Specifications contained herein and Codes referred to. Where the job specification stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.



SECTION - II

2.0 GENERAL INSTRUCTIONS & OBLIGATIONS

2.1 FORMATION OF CONTRACT:

- 21.1 Employer will be the sole judge in the matter of award of Contract and the decision of Employer shall be final and binding.
- The acceptance of tender will be intimated to the successful Bidder by the Employer either by Fax / E mail /Letter or like means defined as Fax of Acceptance (FOA).
- The Contract shall come into force on the date of FOA and the same shall be binding on Employer and Service Provider.

2.2 SIGNING OF AGREEMENT:

The successful Tenderer/Service Provider shall be required to execute an Agreement within 15 days of the FOA in the format attached/enclosed with Tender Document. In the event of failure on the part of the Service Provider to sign the Agreement within the aforesaid stipulated period, the Earnest Money Deposit or initial Security Deposit/Performance Security Deposit (as available, preferably the later) will be forfeited and Employer may consider the Contract as terminated.

2.3 ADDENDA/CORRIGENDA:

23.1 Addenda/ Corrigenda to the Tender Documents incorporating modification(s) and clarification(s) to the Tender Document issued prior to the due date of bid submission shall become integral part of the Contract.

2.4 LIABILITY OF GOVERNMENT OF INDIA:

24.1 It is expressly understood and agreed by and between Bidder /Service Provider and Employer that Employer is entering into this agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood and agreed that the Government of India is not a party to this agreement and has no liabilities, obligations or rights hereunder. It is expressly understood and agreed that Employer is an independent legal entity with power and authority to enter into Contracts solely on its own behalf under the applicable Laws of India and general principles of Contract Law. The Bidder/Service Provider expressly agrees, acknowledges and understands that Employer is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Contract. Accordingly, Bidder/Service Provider hereby expressly waives, releases and foregoes any



and all actions or claims, including cross claims, impleader claims or counter claims against the Government of India arising out of this Contract and covenants not to sue to Government of India as to any manner, claim, cause of action or thing whatsoever arising of or under this agreement/Contract.

2.5 SITE VISIT:

25.1 The Bidder/Service Provider shall be deemed to have visited the Site(s)/work centre(s) and familiarized itself while submitting the Tender. Non-familiarity with the Site conditions by the Bidder/ Service Provider will not be considered a reason either for extra claim(s) or for any delay in performance or any other claim in this regard.

2.6 ACTION IN CASE OF CORRUPT/ FRAUDULENT/ COLLUSIVE/ COERCIVE PRACTICES AND POOR PERFORMANCE:

The Bidder(s)/Service Provider(s) are required to abide by the following documents:

(i) The procedure for action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices containing provisions for putting a Bidder/Service Provider on suspension and/or banning list (as the case may be) if such an agency has indulged in Corrupt/ Fraudulent/ Collusive/ Coercive Practices.

The Procedure is enclosed as Appendix 1 to this GCC.

Further, Bidder(s)/Service Provider(s) accepts and certifies that they would adhere to the Fraud Prevention Policy of GGPL and shall not indulge themselves or allow others (working in GGPL) to indulge in fraudulent activities and that they would immediately apprise the Owner/GGPL/Organization(s) of the fraud/ suspected fraud as soon as it comes to their notice. The Fraud Prevention Policy document is available on GGPL's website (www.godavarigas.in).

(ii) The procedure for evaluation of performance of Service Provider containing provisions for putting a Service Provider on suspension and/or holiday list (as the case may be).

The Procedure is enclosed as Appendix 2 to this GCC.

2.7 RETIRED GOVERNMENT OR EMPLOYER'S OFFICERS:

27.1 No Employee/Officer employed in Engineering or Administrative duties in an Engineering Department of the States/ Central Government or of the Employer is allowed to service as a Service Provider for a period of one year after his retirement /resignation /severance from Government Service or from the employment of the Employer without the previous permission of the Employer. The Contract, if awarded, is liable to be terminated if either the Service Provider or any of his employees is found at any time to be such a



person, who has not obtained the permission of the State/Central Government or of the Employer as aforesaid before submission of tender, or engagement in the Service Provider's service as the case may be.

2.8 CONFLICT OF INTEREST:

During the currency of Contract and after its termination, the Service Provider and its affiliates, shall be disqualified from providing any goods, works or services for any project resulting from or closely related to the Services.

2.9 ABNORMAL RATES:

- 29.1 The Tenderer is expected to quote rate for each item after careful analysis of cost involved for the performance of the completed item considering all specifications and Conditions of Contract. In case, it is noticed that the rates quoted by the Tenderer for any item are unusually higher or unusually lower, it will be sufficient cause for the rejection of the tender/bid unless the Employer is convinced about the reasonableness after scrutiny of the analysis for such rate(s) to be furnished by the Tenderer (on demand).
- In case of Abnormally High Rated (AHR) item(s), the same shall be dealt as per AHR clause in the SCC (as applicable).

2.10 GENERAL OBLIGATIONS OF SERVICE PROVIDER:

Service Provider shall, in accordance with and subject to the terms and conditions of this Contract:

- 210.1 perform the services in accordance with the Scope of Services /Specifications and Activity Schedule of the Tender Document and carry out its obligations with all due diligence and efficiency, in accordance with generally accepted professional techniques and practices and shall observe sound management practices and employ appropriate advance technology and safe methods. When completed, the job/services shall be fit for the purpose for which the services are intended as specifically defined in the Contract.
- 2102 Provide all labour as required to provide the Service unless otherwise provided in the Scope of Services or Special Conditions of the Contract.
- 2103 Perform all other obligations, jobs / services which are required by the terms of this Contract or which reasonably can be implied from such terms as being necessary for providing necessary service as per the Contract.
- 2104 be deemed to have satisfied himself before submitting his bid as to the correctness and sufficiency of its bid for the services required and of the rates and prices quoted, which



rates and prices shall, except insofar as otherwise provided, cover all its obligations under the Contract.

- 2105 Give or provide all necessary supervision during the performance of the services and as long thereafter within the warranty period/DLP as Employer may consider necessary for the proper fulfilling of Service Provider's obligations under the Contract.
- 210.6 not disrupt the Services of the Employer being carried out by the Service Provider / and shall provide access for carrying out job/services to:
 - Employer's personnel(s), and /or
 - any other Contractor(s) / Service Provider(s) employed by Employer, and /or
 - personnel of public authority (ies)/third party (ies)

Further, the Service Provider shall execute the job carefully without causing damage to the existing facility (ies) and facility (ies) of third party (ies) and in case of such happening shall immediately bring to the notice of EIC.

Further, the coordination and inspection of the day-to-day job under the Contract shall be the responsibility of the Engineer-in-Charge (EIC). The EIC or his authorized representative including any statutory authority shall at all reasonable times, have full power and authority to access and inspect the Services wherever in progress either on the Site or at the Service Provider's premises/workshops and the Service Provider shall afford or procure every facility and assistance to carry out such inspection. Such Inspection shall not release the Service Provider from any obligation under the Contract.

2.11 SERVICE PROVIDER'S REPRESENTATIVE & PERSONNEL:

- 211.1 Service Provider shall appoint a person ("Service Provider's Representative") who shall be responsible for and authorized to represent it at all times during the progress of the Service and to receive and to act on any request made by Employer in the performance of the Service pursuant to the terms of this Contract.
- 2112 Service Provider's Representative shall have full authority to represent and bind the Service Provider in relation to any matter concerning the Service Provider's performance of the services under the Contract and Employer shall be entitled to rely on all the decisions of the Service Provider's Representative as if they were the decisions of the Service Provider.
- 2113 Service Provider's Representative shall supervise, coordinate and ensure the quality of all aspects of his obligations under this Contract. Service Provider shall not change its Representative without the prior approval of Employer.
- 211.4 Service Provider's Representative shall liaise with Employer for the proper coordination and timely completion of the Services and on any matter pertaining to the same.



- 2115 Service Provider's Representative shall extend full cooperation to Employer's representatives/inspector in the manner required by them for supervision /inspection/ observation of equipment, material, procedures, performance, reports and records pertaining to Services.
- 211.6 Service Provider's Representative shall have complete charge of his personnel engaged in the performance of the Service and to ensure compliance of rules and regulations and safety practice.
- 211.7 If the Service Provider's Representative is found not acceptable to the EIC, the Service Provider shall, as soon as practicable, having regard to the requirement of replacing him, after receiving notice of such withdrawal, remove the representative and shall not thereafter employ him again on the Services in any capacity and shall replace him by another representative acceptable to the EIC.

2.12 SERVICE PROVIDER'S EMPLOYEES / PERSONNEL:

The Service Provider in connection with performing the Services and remedying of any defects, shall provide:

- (a) only such skilled and experienced personnel(s) in their respective areas; and
- (b) such skilled, semi-skilled and un-skilled labour as is necessary for the proper and timely fulfilling of the Service Provider's obligations under the Contract.

The Service Provider shall provide skilled / qualified /experienced personnel, if specified in the SCC /Scope of Work.

While engaging the contractual manpower, Service Provider is required to make effort to provide opportunity of employment to the people belonging to Scheduled Castes and weaker sections of society also in order to have a fair representation of these sections.

2.13 CONTRACT PERFORMANCE SECURITY (CPS):

- 213.1 The Service Provider shall provide Contract Performance Security (CPS) to the Employer, within 30 days from the date of notification of award (i.e. FOA/Letter of Acceptance) or the date specified in the notification of award whichever is earlier, for an amount mentioned therein. The CPS shall be returned/refunded three months after Contract completion period and Defects Liability Period (DLP), if any. All costs associated with CPS shall be borne by the Service Provider. No charges or interest shall be payable by the Employer even if the CPS is in the form of a Demand Draft.
- 2132 The Service Provider shall furnish the CPS in the form of a Demand Draft or a Bank Guarantee or an irrevocable Letter of Credit from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve Bank of India as scheduled foreign bank. However, for other than the Nationalized Indian Banks, the banks whose BGs are furnished, must be commercial banks having net worth in excess of Rs. 100



crores and a declaration to this effect should be made by such commercial bank either in the bank guarantee itself or separately on a letter head. The bank guarantee or the Letter of Credit shall be submitted in the prescribed format.

- 2133 If the Service Provider or their employees /agents / representatives or Sub-Service Provider (if authorized by Employer) shall damage, break, deface or destroy any property/equipment belonging to the Employer or third party(ies) during the execution of this Contract, the same shall be made good by the Service Provider at his own expenses and in default thereof, the EIC may cause the same to be made good by other agencies and recover expenses plus 15% overhead from the Service Provider. The decision of EIC in this matter shall be final and binding on the Service Provider.
- All compensation, claim or other sums of money payable by the Service Provider to the Employer under terms of this Contract may be deducted from or paid by the encashment of a sufficient part of his Contract Performance Security or from any sums which may be due or may become due to the Service Provider by the Employer on any account whatsoever and in the event of his CPS being reduced by reasons of any such deductions or sale of aforesaid, the Service Provider shall within ten days thereafter make good in form of bank draft(s)/BG/LC (as the case may be) as aforesaid any sum or sums which may have been deducted from or realised by encashment of his CPS, or any part thereof. The Service Provider shall pay to the Employer on demand without protest any balance remaining due. In this regard no interest shall be payable by the Employer to Service Provider for such sum deposited as CPS.
- The CPS deposit shall cover the entire Contract value including extra jobs/ services. As long as the CPS submitted at the time of award take cares the extra jobs/ services executed and total executed value are within the awarded Contract price, there is no need for additional CPS. As soon as the total executed value is likely to exceed the ceiling of awarded Contract Value, the Service Provider should furnish additional CPS through DD or submit amendment to existing BG/LC to effect the enhancement of CPS.
- 2136 Failure of the successful bidder to comply with the requirements of Clause 2.13 shall constitute sufficient grounds for the annulment of the award, the forfeiture of CPS and any other actions or remedies available to the Employer.

2.14 FAILURE BY THE SERVICE PROVIDER TO COMPLY WITH THE PROVISIONS OF THE CONTRACT:

214.1 If the Service Provider refuses or fails to provide the Service or any part thereof with such diligence as will ensure its performance within the time specified in the Contract or extension thereof or fails to perform any of his obligation under the Contract or in any manner commits a breach of any of the provisions of the Contract it shall be open to the Employer at its option by written notice to the Service Provider:



- a) TO DETERMINE THE CONTRACT in which event the Contract shall stand terminated and shall cease to be in force and effect on and from the date appointed by the Employer on that behalf, whereupon the Service Provider shall stop forthwith any of the Service then in progress, except such Service as the Employer may, in writing, require to be done to safeguard any property or work or installations from damage, and the Employer, for its part, may take over the Service remaining unfinished by the Service Provider and complete the same through another service provider or by other means, at the risk and cost of the Service Provider, and any of his sureties if any, shall be liable to the Employer for any excess cost occasioned by such service having to be so taken over and obtained by the Employer over and above the cost at the rates specified in the schedule of quantities and rate/prices.
- b) WITHOUT DETERMINING THE Contract to take over the Service of the Service Provider or any part thereof and complete the same through other service provider or by other means at the risk and cost of the Service Provider. The Service Provider and any of his sureties are liable to the Employer for any excess cost over and above the cost at the rates specified in the Schedule of Quantities/ rates, occasioned by such services having been taken over and completed by the Employer.
- 2142 In such events of Clause 2.14.1(a) or (b) above, the following shall be applicable:
 - a) The whole or part of the Contract Performance Security furnished by the Service Provider is liable to be forfeited without prejudice to the right of the Employer to recover from the Service Provider the excess cost referred to in the sub-clause aforesaid. The Employer shall also have the right of taking possession and utilising in completing the services or any part thereof, such as materials, equipment and plants available at service site belonging to the Service Provider as may be necessary and the Service Provider shall not be entitled for any compensation for use or damage to such materials, equipment and plant.
 - b) The amount that may have become due to the Service Provider on account of service already executed by him shall not be payable to him until after the expiry of Six (6) calendar months reckoned from the date of termination of Contract or from the taking over of the Service or part thereof by the Employer as the case may be, during which period the responsibility for faulty material or workmanship in respect of such service shall, under the Contract, rest exclusively with the Service Provider. This amount shall be subject to deduction of any amounts due from the Contract to the Employer under the terms of the Contract authorized or required to be reserved or retained by the Employer.
- 2143 Before taking any action as per Clause 2.14.1(a) or (b) if in the judgment of the Employer, the default or defaults committed by the Service Provider is/are curable and can be cured by the Service Provider if an opportunity given to him, then the Employer may issue Notice



in writing calling the Service Provider to cure the default within such time specified in the Notice.

- 214.4 The Employer shall also have the right to proceed or take action as per 2.14.1(a) or (b) above, in the event that the Service Provider becomes bankrupt, insolvent, compounds with his creditors, assigns the Contract in favour of his creditors or any other person(s) or being a company or a corporation goes into voluntary liquidation, provided that in the said events it shall not be necessary for the Employer to give any prior notice to the Service Provider.
- 2145 Termination of the Contract as provided for in sub- clause 2.14.1(a) above shall not prejudice or affect their rights of the Employer which may have accrued upto the date of such termination.

2.15 SERVICE PROVIDER REMAINS LIABLE TO PAY COMPENSATION IF ACTION NOT TAKEN UNDER CLAUSE 2.14

2.15.1 If in any case in which any of the powers conferred upon the Employer by clause 2.14 thereof shall have become exercisable and the same had not been exercised, the nonexercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any further case of default by the Service Provider for which by any clause or clauses hereof he is declared liable to pay compensation amounting to the whole of his Contract Performance Security, and the liability of the Service Provider for past and future compensation shall remain unaffected. In the event of the Employer putting in force the power under above sub-clause 2.14 (a) or 2.14 (b) vested in him under the preceding clause he may, if he so desired, take possession of all or any tools and plants, materials and stores at the site thereof belonging to the Service Provider or procured by him and intended to be used for the execution of the Service or any part thereof paying or allowing for the same in account at the Contract rates or in case of these not being applicable, at current market rates to be certified by the EIC whose certificate thereof shall be final, otherwise the EIC may give notice in writing to the Service Provider or Service Provider's Representatives requiring him to remove such tools, plant, materials or stores from the premises (within a time to be specified in such notice).

Failure of any action by the Service Provider for removal of material/tools/plant/store etc. within the period mentioned in notice of EIC, the Employer shall also be entitled to recover handling and storage charges @5% of the estimated value of material tools/plant/store for each month or part of a month without relieving the Servicer Provider from any other related liability. In the event of the Service Provider's failure to remove the same within a period of 6 months or as decided by the EIC, the EIC may take action for removal through auction or private sale on behalf of the Service Provider and at his risk in all respects. The Service Provider shall be liable to pay the Employer the handling & storage charges per month or a part of the month from the date of serving the notice by the EIC to the date of removal of the materials by the Employer plus overhead charges @ 15% of sale value of such materials. In case of negative or zero sale value, the overhead charges shall be



applicable on the handling & storage charges. The decision of EIC w.r.t. such removal and the amount of the proceeds shall be final and binding on the Service Provider.

2.16 CHANGE IN CONSTITUTION:

Where the Service Provider is a partnership firm, the prior approval of the Employer shall be obtained in writing, before any change is made in the constitution of the firm. Where the Service Provider is an individual or a Hindu undivided family business concern, such approval as aforesaid shall, likewise be obtained before such Service Provider enters into any agreement with other parties, where under, the reconstituted firm would have the right to carry out the service hereby undertaken by the Service Provider. In either case if prior approval as aforesaid is not obtained, the Contract shall be deemed to have been allotted in contravention of clause 2.23 hereof.

2.17 TERMINATION OF CONTRACT:

217.1 TERMINATION OF CONTRACT FOR DEATH

If the Service Provider is an individual or a proprietary concern and the individual or the proprietor dies or if the Service Provider is a partnership concern and one of the partner dies then unless, the Employer is satisfied that the legal representative of the individual or the proprietary concern or the surviving partners are capable of carrying out and completing Contract, the Employer is entitled to cancel the Contract for the uncompleted part without being in any way liable for any compensation payment to the estate of the deceased Service Provider and/or to the surviving partners of the Service Provider's firm on account of the cancellation of Contract. The decision of the Employer/EIC in such assessment shall be final & binding on the parties. In the event of such cancellation, the Employer shall not hold the estate of the deceased Service Provider and/or the surviving partners of Service Provider's firm liable for any damages for non-completion of the Contract.

2172 TERMINATION OF CONTRACT IN CASE OF LIQUIDATION / BANKRUPTCY, ETC.

If the Service Provider shall dissolve or become bankrupt or insolvent or cause or suffer any receiver to be appointed of his business of any assets thereof compound with his Creditors, or being a corporation commence to be wound up, not being a member's voluntary winding up for the purpose of amalgamation or reconstruction, or carry on its business under a Receiver for the benefits of its Creditors any of them, Employer shall be at liberty to terminate the Contract forthwith upon coming to know of the happening of any such event as aforesaid by notice in writing to the Service Provider or to give the Receiver or Liquidator or other person, the option of carrying out the Contract subject to his providing a guarantee up to an amount to be agreed upon by the Employer for due and faithful performance of the Contract.



2173 TERMINATION OF CONTRACT FOR CORRUPT / FRADULENT / COLLUSIVE / COERCIVE PRACTICES AND NON-PERFORMANCE

If the Bidder/Service Provider is found to have indulged in Corrupt/ Fraudulent /Collusive/Coercive practices, the Contract shall be terminated and the Bidder/ Service Provider shall be banned for future business with GGPL. The detailed procedure for banning including suspension in this regard may be referred as enclosed as Appendix 1. Due to non-performance of the Service Provider leading to termination of the Contract, the Service Provider initially shall be put on suspension list and thereafter on holiday list of Employer for a period mentioned in the detailed procedure, to be reckoned from the date of communication by Owner/Employer. The detailed procedure for evaluation of performance in this regard may be referred as enclosed as Appendix 2.

217.4 TERMINATION FOR CONVENIENCE

Notwithstanding anything contained in the Contract, the Employer may, by 30 (Thirty) days written notice, terminate the Contract in whole or in part. In addition to the payment mentioned at clause 2.18, the Service Provider shall be compensated for de-mobilization and other costs incurred at mutually negotiated terms.

In case of such termination, the obligation of the Employer to pay, shall be limited to the extent of work/job completed by the Service Provider as per provision of the Contract upto the date of termination, subject to the Service Provider complying with other terms of the Contract.

Notwithstanding the termination of the Contract, the parties shall continue to be bound by the provisions of this Contract that reasonably require some action or forbearance after such termination.

2.18 AMOUNT PAYABLE IN CASE OF TERMINATION:

In all cases of termination herein set forth, the obligation of the Employer to pay, shall be limited to the extent of service rendered by Service Provider as per provision of the Contract upto the date of termination, subject to the Service Provider complying with other terms of the Contract. Notwithstanding the termination of the Contract, the parties shall continue to be bound by the provisions of this Contract that reasonably require some action or forbearance after such termination.

2.19 MEMBERS OF THE EMPLOYER NOT INDIVIDUALLY LIABLE:

219.1 No Director, or official or employee of the Employer shall in any way be personally bound



or liable for the acts or obligations of the Employer under the Contract or answerable for any default or omission in the observance or performance of any of the acts, matters or things which are herein contained.

2.20 EMPLOYER NOT BOUND BY PERSONAL REPRESENTATIONS:

220.1 The Service Provider shall not be entitled to any increase on the scheduled rates or any other right or claim whatsoever by reason of any representation, explanation statement or alleged representation, promise or guarantees given or alleged to have been given to him by any person.

2.21 FORCE MAJEURE:

221.1 In the event of either party being rendered unable by Force Majeure to perform any obligations required to be performed by them under the Contract the relative obligation of the party affected by such Force Majeure shall upon notification to the other party be suspended for the period during which Force Majeures event lasts. The cost and loss sustained by the either party shall be borne by the respective parties.

The term "Force Majeures" as employed herein shall include:

- (a) act of terrorism;
- (b) riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection of military or usurped power;
- (c) ionising radiation or contamination, radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component;
- (d) epidemics, earthquakes, flood, fire, hurricanes, typhoons or other physical natural disaster, but excluding weather conditions regardless of severity; and
- (e) freight embargoes, strikes at national or state-wide level or industrial disputes at a national or state-wide level in any country where Works/Services are performed, and which affect an essential portion of the Works/Services but excluding any industrial dispute which is specific to the performance of the Works/Services or the Contract.

For the avoidance of doubt, inclement weather, third party breach, delay in supply of materials (other than due to a nationwide transporters' strike) or commercial hardship shall not constitute a Force Majeure event.

2212 Notification of Force Majeure

The affected party shall notify within 10 (ten) days of becoming aware of or the date it ought to have become aware of the occurrence of an event of Force Majeure giving full



particulars of the event of Force Majeure and the reasons for the event of Force Majeure preventing the affected party from, or delaying the affected party in performing its obligations under the Contract.

2213 Right of either party to terminate

If an event of Force Majeure occurs and its effect continues for a period of 180 (one hundred eighty) days or more in a continuous period of 365 (three hundred sixty-five) days after notice has been given under this clause, either party may terminate the Contract by issuing a written notice of 30 (thirty) days to the other party. Further, the Service Provider shall with all reasonable diligence remove from the Site all the Service Provider's equipment and shall give similar facilities to his Sub Service Provider to do so.

2214 Payment in case of termination due to Force Majeure

The Contract Price attributable to the Works/Services performed till the date of the commencement of the relevant event of Force Majeure with effective recovery/ retention shall be payable to Service Provider.

The Service Provider has no entitlement and Employer has no liability for:

- a) any costs, losses, expenses, damages or the payment of any part of the Total Contract Price during an event of Force Majeure; and
- b) any delay costs in any way incurred by the Service Provider due to an event of Force Majeure.
- Time for performance of the relative obligation suspended by the Force Majeureshall then stand extended by the period for which such cause lasts.

221.6 Outbreak of War:

If during the currency of the Contract there shall be an out break of war whether declared or not, in that part of the World which whether financially or otherwise materially affect the execution of the Work, the Service Provider shall unless and until the Contract is terminated under the provisions in this clause continue to use his best endeavour to complete the execution of the Work/Services, provided always that the Employer shall be entitled, at any time after such out break of war to terminate or re-negotiate the Contract by giving notice in writing to the Service Provider and upon such notice being given the Contract shall, save as to the rights of the parties under this clause and to the operation of the clauses entitled settlement of Disputes and Arbitration hereof, be terminated but without prejudice to the right of either party in respect of any antecedent breach thereof.

2.22 PRICE REDUCTION SCHEDULE:



Time is the essence of the Contract. In case the Service Provider fails to mobilize / deploy the required manpower and the complete equipments so as to commence the Services within Mobilisation Period and complete the Services within the stipulated period, then, unless such failure is due to Force Majeure as defined in Clause 2.21 herein above or due to Employer's defaults, the total Value of Contract shall be reduced by ½ (half) % of the total Value of Contract per complete week of delay or part thereof subject to a maximum of 5 (five) % of the total Value of Contract, by way of reduction in price for delay and not as penalty. The Employer shall be at liberty to adjust or deduct the said amount from amount due to the Service Provider / it's Contract Performance Security payable on demand.

The decision of the EIC with respect to applicability of Price Reduction Schedule shall be final and binding on the Service Provider.

- 2222 The parties agree that this is a genuine pre-estimate of the loss/damage which will be suffered by the Employer on account of delay on the part of the Service Provider and the said amount will be adjusted for the amount payable to the Service Provider, without there being any proof of the actual loss or damages having been caused by such delay/breach.
- 2223 The Price Reduction will be calculated on the basis of total Value of Contract / executed Value of Contract (as the case may be) excluding taxes and duties where such taxes and duties have been shown separately in the Contract.
- As mentioned above, in case of delay in execution of Contract, Service Provider will raise invoice for reduced value as per Price Reduction Clause. If Service Provider has raised the invoice for full value, then Service Provider will issue Credit Note towards the applicable Price Reduction Schedule amount.

In case Service Provider fails to submit the invoice for reduced value or does not issue credit note as mentioned above, GGPL will release the payment to Service Provider after effecting the Price Reduction Schedule clause.

In the event any financial implication arises on GGPL due to issuance of invoice without reduction in price or non-issuance of Credit Note, the same shall be to the account of Service Provider.

2.23 ASSIGNMENT/SUBLET:

223.1 The Service Provider shall not, save with previous written consent of the Engineer-incharge, sublet, transfer or assign the Contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever. Provided, nevertheless, that any such consent shall not relieve the Service Provider from any obligation, duty or responsibility under the Contract.



- 2232 The basic scope of Services cannot be sublet. However, on specific request of the Service Provider and subject to written consent of Employer, the Service Provider may sublet allied/incidental jobs related to the Services. Such consent shall not relieve the Service Provider from any obligation, duty or responsibility under the Contract and Service Provider shall be fully responsible for the Services hereunder and the execution and performance of the Contract.
- Sub-letting of whole Contract is prohibited. An undertaking to this effect will be given by Service Provider along with each invoice/ bill.

2.24 LIENS:

- 224.1 If, at any time there should be evidence of any lien or claim for which the Employer might have become liable and which is chargeable to the Service Provider, the Employer shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify the Employer against such lien or claim and if such lien or claim be valid, the Employer may pay and discharge the same and deduct the amount so paid from any money which may be or may become due and payable to the Service Provider. If any lien or claim remain unsettled after all payments are made, the Service Provider shall refund or pay to the Employer all money that the latter may be compelled to pay in discharging such lien or claim including all costs and reasonable expenses.
- The Employer shall have lien on all materials, equipments including those brought by the Service Provider for the purpose of providing service.
- 2243 The final payment shall not become due until the Service Provider delivers to the EIC a complete release or waiver of all liens arising or which may arise out of his agreement or receipt in full or certification by the Service Provider in a form approved by EIC that all invoices for labour, materials, services have been paid in lien thereof and if required by the EIC in any case an affidavit that so far as the Service Provider has knowledge or information the releases and receipts include all the labour and material for which a lien could be filled.
- Service Provider will indemnify and hold the Employer harmless, for a period of two years after the issue of Completion/Execution Certificate, from all liens and other encumbrances against the Employer on account of debts or claims alleged to be due from the Service Provider or his Sub-Service Provider to any person and on behalf of Employer, the Service Provider will defend at his own expense, any claim or litigation brought against the Employer or the Service Provider including Sub-Service Provider in connection therewith. Service Provider shall defend or contest at his own expense, any fresh claim or litigation against the Employer by any person including his Sub-Service Provider, till its satisfactory settlement even after the expiry of two years from the date of issue of Completion/Execution Certificate.



2.25 DELAYS BY EMPLOYER OR HIS AUTHORISED REPRESENTATIVE:

- 225.1 In case the Service Provider's performance is delayed due to any act or omission on the part of the Employer or his authorized Representative, then the Service Provider shall be given due extension of time for the completion of the Service, to the extent such omission on the part of the Employer has caused delay in the Service Provider's performance of his Services.
- No adjustment in Contract Price shall be allowed for reasons of such delays and extensions granted except as provided in Tender Document, where the Employer reserves the right to seek indulgence of Service Provider to maintain the agreed Time Schedule of Completion. In such an event the Service Provider shall be obliged to provide Service for additional time beyond stipulated time including Off-days / Holidays or by enhancing resources to achieve the completion date/interim targets.

2.26 NO WAIVER OF RIGHTS:

None of the terms and conditions of this Contract shall be deemed waived by either party unless such waiver is executed in writing by the duly authorized representative of both the parties.

2.27 CERTIFICATE NOT TO AFFECT RIGHT OF EMPLOYER AND LIABILITY OF SERVICE PROVIDER:

227.1 No interim payment certificate(s) issued by the EIC of the Employer, nor any sum paid on account by the Employer, nor any extension of time for execution of the service granted by Employer shall affect or prejudice the rights of the Employer against the Service Provider or relieve the Service Provider of his obligations for the due performance of the Contract, or be interpreted as approval of the Service done and no certificate shall create liability for the Employer to pay for alterations, amendments, variations or additional services not ordered, in writing, by Employer or discharge the liability of the Service Provider for the payment of damages whether due, ascertained, or certified or not or any sum against the payment of which he is bound to indemnify the Employer.

2.28 LANGUAGE AND MEASURES:

All documents pertaining to the Contract including Specifications, Schedules, Notices, Correspondence, operating and maintenance Instructions or any other writing shall be written in English/Hindi language. The Metric System of measurement shall be used in the Contract unless otherwise specified.

2.29 RELEASE OF INFORMATION:

229.1 The Service Provider shall not communicate or use in advertising, publicity, sales releases



or in any other medium, photographs, or other reproduction of the Service under this Contract or description of the site dimensions, quantity, quality or other information concerning the Service unless prior written permission has been obtained from the Employer.

2.30 COMPLETION PERIOD, CONTRACT PERIOD AND COMPLETION OF CONTRACT:

- 230.1 The Completion Period of Service and Contract Period shall be as mentioned in Special Conditions of Contract.
- Unless terminated under the provisions of any other relevant clause, this Contract shall be deemed to have been completed at the expiration of the Defect Liability Period as provided for under the Contract.

2.31 INDEPENDENT CAPACITY

231.1 The parties intend that an independent Service Provider relationship will be created by this Contract. The Service Provider and his/her employees or agents performing under this Contract are not employees or agents of the Employer. The Service Provider will neither hold himself/herself out as nor claim to be an officer or employee of the Employer by reasons hereof, nor will the Service Provider make any claim of right, privilege or benefit that would accrue to such employee under law. Conduct and control of work will be solely with the Service Provider.

2.32 NOTICE

- TO THE SERVICE PROVIDER: Any notice to be given to the Service Provider or his duly authorised representative at the job Site under the terms of the Contract may be served by the Employer by facsimile / e-mail or through registered post/Courier at the address/contact information furnished by the Service Provider. Proof of issue of any such notice could be conclusive of the Service Provider having been duly informed of all contents therein.
- TO THE EMPLOYER: Any notice to be given to the EIC of the Employer under the terms of the Contract may be served by the Service Provider, by facsimile / e-mail or delivering the same through registered post /Courier at the concerned site office.
- Either party may change a nominated address to another address in the country where the Services are being provided by prior notice to the other party, with a copy to EIC and the EIC may do so by prior notice to both the parties. The decision of EIC in this regard shall be final and binding on the parties.

2.33 CONFIDENTIALITY:



The Service Provider, it's Sub-Service Provider and their personnel shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information related to Service/project, this Contract, or Employer's business or operations without the prior written consent of the Employer.

2.34 INTELLECTUAL PROPERTY RIGHT:

The Service Provider shall retain the copy right and other intellectual property rights in the Service Provider's document and other design documents made by (or on behalf of) the Service Provider. Subject to the confidentiality obligations, by signing the Contract, within the Contract Price, the Service Provider shall be deemed to give to the Employer a non-terminable, transferable, non-exclusive and royalty-free right to copy, use and communicate the Service Provider's documents for the operation, maintenance, repair of the Service and Statutory purposes, but not for any other purpose. Such documents of the Service Provider shall not be used, copied or communicated to a third party by or on behalf of the Employer for the purposes other than those permitted, without the Service Provider's Consent.



SECTION - III

3.0 PERFORMANCE OF SERVICE

3.1 EXECUTION OF SERVICES:

3.1.1 All Services shall be provided in strict conformity with the provisions of the Contract Documents and with such explanatory detailed specification and instruction as may be furnished from time to time to the Service Provider by EIC. The Service Provider shall undertake to perform all Services under this Contract with all reasonable skill, diligence and care in accordance with sound industry practice or international / national standards, wherever applicable (as the case may be) to the satisfaction of the Employer and accept full responsibility for the satisfactory quality of such services as performed by them.

3.2 CHANGES IN SERVICES:

- During the performance of the Services, EIC / Employer may make a change in the Services within the general scope of this Contract including, but not limited to, changes in methodology and minor additions to or deletions from the Services and Service Provider shall render the service as changed. Changes of this nature will be affected by a written order (i.e. Amendment) by the Employer. The time of completion of the said job may be extended for the part of the particular job at the discretion of Engineer-In-Charge, for only such alterations or substitutions of the Services, as he may consider just and reasonable.
- If any change result in an increase in compensation payable to Service Provider or in terms of a credit to be passed on to Employer, Service Provider shall submit to EIC an estimate of the amount of such compensation or credit in a form prescribed by Employer. Such estimates shall be based on the rates shown in the Schedule of Rates. Upon review of Service Provider's estimate, Employer shall establish and set forth in the written order the amount of the compensation or credit for the change or a basis for determining a reasonable compensation or credit for the change.

3.3 ACTION AND COMPENSATION IN CASE OF POOR SERVICE:

33.1 If it shall appear to the EIC that any service has been rendered with unsound, imperfect or unskilled way, or with materials /manpower of any inferior description, or that any materials / manpower provided by the Service Provider for the execution of the Service are unsound, or of a quality inferior to that Contracted for, or otherwise not in accordance with the Contract, the Service Provider shall on demand in writing from the EIC or his authorized representative specifying the Service, materials or manpower complained of notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify the service so specified and at his own cost and in the event of failure to do so within the period specified by the EIC in his demand aforesaid, the Service Provider



shall be liable to pay compensation at the rate of 1 % (One percent) of the estimated cost of the whole Service, for every week limited to a maximum of 10% (ten percent) of the value of the whole Service, in event of his failure to do so the EIC may on expiry of notice period rectify/re-execute the Service as the case may be at the risk and expense in all respects of the Service Provider or may terminate the contract due to non- performance. The decision of the EIC as to any question arising under this clause shall be final and conclusive.

3.4 SUSPENSION OF SERVICES:

- 3.4.1 Subject to the provisions of sub-para 3.4.2 of this clause, the Service Provider shall, if ordered in writing by the EIC, temporarily suspend the Services or any part thereof for such written order and not proceed with the Service therein ordered to be suspended until, he shall have received a written order to proceed therewith. The Service Provider shall not be entitled to claim compensation for any loss or damage sustained by him by reason of temporary suspension of the Services aforesaid. An extension of time for completion, corresponding with the delay caused by any such suspension of the Services as aforesaid will be granted to the Service Provider should he apply for the same provided that the suspension was not consequent to any default or failure on the part of the Service Provider.
- 3.42 In case of suspensions of entire Service, ordered in writing by EIC, for a period of more than two months, the Service Provider shall have the option to terminate the Contract.

3.5 DEFECTS LIABILITY PERIOD:

- 35.1 The Service Provider unless otherwise specified elsewhere in the tender document shall guarantee the installation/Service for a period of 12 months from the date of completion of Service mentioned in the Completion Certificate issued by the EIC. Any damage or defect that may arise or lie undiscovered at the time of issue of Completion Certificate, connected in any way with the equipment or materials supplied by him or in the workmanship, shall be rectified or replaced by the Service Provider at his own expense as deemed necessary by the EIC. In case of default, the EIC may carry out such services by other service provider(s) and deduct actual cost incurred towards labour, supervision and materials consumables or otherwise plus 15% towards overheads from any sums that may then be or at any time thereafter, become due to the Service Provider or from his Contract Performance Security, or the proceeds of sale thereof or a sufficient part on thereof. The decision of EIC in this regard shall be final and binding.
- If the Service Provider feels that any variation in Service or in quality of materials or proportions would be beneficial or necessary to fulfill the guarantees called for, he shall bring this to the notice of the EIC in writing. If during the period of liability any portion of the Service/Equipment, is found defective and is rectified/ replaced, the period of liability of 12 months for such equipment/ portion of Service shall be operative from the date such rectification/ replacement is carried out and Contract Performance Guarantee shall be



furnished separately for the extended period of liability for that portion of Service/ Equipment only. However, in no such case extension will exceed 24 months from the date of initial DLP. Notwithstanding the above provisions the supplier's, guarantees/warrantees for the replaced/rectified Equipment/Service shall also be passed on to the Employer.

3.6 COMPLETION CERTIFICATE:

361 APPLICATION FOR COMPLETION CERTIFICATE: When the Service Provider fulfills his obligation under the Contract he shall be eligible to apply for Completion Certificate. The EIC shall normally issue to the Service Provider the Completion Certificate within one month after receiving any application thereof from the Service Provider after verifying from the completion documents and satisfying himself that the Service has been rendered in accordance with and as set out in the Contract Documents. The Service Provider, after obtaining the Completion Certificate, is eligible to present the final bill for the Service executed by him under the terms of Contract.

Completion of jobs/services for issuance of completion certificate shall constitute completion of jobs/ services as per provisions of LOA/Contract duly accepted and certified by EIC.

- 362 COMPLETION CERTIFICATE: Within one month from receipt of application from Service Provider after the completion of the Service in all respects as specified above at clause no. 3.6.1, the Service Provider shall be furnished with a certificate by the EIC of such completion, but no certificate shall be given nor shall the Service be deemed to have been rendered until all scaffolding, Equipment(s) & machine(s), surplus materials and rubbish brought for/ generated during execution of service is cleared off the Site completely. EIC's certification about completion of service in all aspects shall be binding and conclusive.
- 363 COMPLETION CERTIFICATE DOCUMENTS: For the purpose of Completion, the following documents will be deemed to form the completion documents:
 - i) The technical documents according to which the Service was carried out.
 - ii) Material appropriation, Statement for the materials issued by the Employer for the Service and list of surplus materials returned to the Employer's store duly supported by necessary documents

3.6.4 EXECUTION CERTIFICATE:

Execution Certificate against Rate/ Maintenance contract shall be issued by EIC against written request from Service Provider.

3.7 FINAL DECISION & FINAL CERTIFICATE:

3.7.1 Upon expiry of the period of liability and subject to the Engineer-in-Charge being satisfied



that the Service Provider has in all respect duly made-up any shortfall and performed all his obligations under the Contract, the Engineer-in- Charge shall (without prejudice to the rights of the Employer to retain the provisions of relevant Clause hereof) otherwise give a certificate herein referred to as the Final Certificate to that effect. The Service Provider shall not be considered to have fulfilled the whole of his obligations under Contract until Final Certificate shall have been given by the Engineer-In- Charge.

3.8 LIMITATION OF LIABILITY

- 381 Notwithstanding anything contrary contained herein, the aggregate total liability of Service Provider to Employer under the Contract shall not exceed the Total Contract Value, except that this clause shall not limit the liability of the Service Provider for following:
 - (a) In the event of breach of any Applicable Law;
 - (b) In the event of fraud, willful misconduct or illegal or unlawful acts, or gross Negligence of the Service Provider or any person acting on behalf of the Service Provider; or
 - (c) In the event of acts or omissions of the Service Provider which are contrary to the most elementary rules of diligence which a conscientious Service Provider would have followed in similar circumstances; or
 - (d) In the event of any claim or loss or damage arising out of infringement of Intellectual Property; or
 - (e) For any damage to any third party, including death or injury of any third party caused by the Service Provider or any person or firm acting on behalf of the Service Provider in executing the Works/Services.

However, neither party shall be liable to the other Party for any indirect nor consequential loss or damage like loss of use, loss of profit, loss of production or business interruption which is connected with any claim arising under the Contract.

3.9 INDEMNITY:

39.1 If any action is brought before a Court, Tribunal or any other Authority against the Employer or an officer or agent of the Employer, for the failure, omission or neglect on the part of the Service Provider to perform any acts, matters, covenants or things under the Contract, or damage or injury caused by the alleged omission or negligence on the part of the Service Provider, his agents, representatives or his Sub-Service Provider's, or in connection with any claim based on lawful demands of Sub-Service Provider's servicemen suppliers or employees, the Service Provider, shall in such cases indemnify and keep the Employer and/or their representatives harmless from all losses, damages, expenses or decrees arising out of such action.



SECTION - IV

4.0 PAYMENT, INSURANCE AND TAXES

4.1 DEDUCTION FROM THE CONTRACT PRICE:

4.1.1 All costs, damages or expenses which Employer may have paid or incurred, which under the provisions of the Contract, the Service Provider is liable to pay to the Employer. All such claims shall be claimed by the Employer from the Service Provider regularly as and when they fall due. Such claims shall be paid by the Service Provider within 15 (fifteen) days of the receipt of the corresponding bills/ claims and if not paid by the Service Provider within the said period, the Employer may, then, deduct the amount from any immediate moneys due to the Service Provider like R.A Bills, Final Bills, Contract Performance Security or any payment becoming due to the Service Provider under the Contract or may be recovered by actions of law or otherwise, if the Service Provider fails to satisfy the Employer of such claims.

4.2 SCHEDULE OF RATES AND PAYMENTS:

421 SERVICE PROVIDER'S REMUNERATION:

The price to be paid by the Employer to Service Provider for the whole of the Service to be done and for the performance of all the obligations undertaken by the Service Provider under the Contract Documents shall be ascertained by the application of the respective Schedule of Rates (the inclusive nature of which is more particularly defined by way of application but not of limitation, with the succeeding sub-clause of this clause) and payment to be made accordingly for the Services actually executed and approved by the Engineer-in-Charge. The sum so ascertained shall (except only as and to the extent expressly provided herein) constitute the sole and inclusive remuneration of the Service Provider under the Contract and no further or other payment whatsoever shall be or become due or payable to the Service Provider under the Contract.

422 SCHEDULE OF RATES TO BE INCLUSIVE:

The prices/rates quoted by the Service Provider shall remain firm till the issue of Final Certificate and shall not be subject to escalation. Schedule of Rates shall be deemed to include and cover all costs, expenses and liabilities of every description and all risks of every kind to be taken in rendering the services to the Employer by the Service Provider. The Service Provider shall be deemed to have known the nature, scope, magnitude and the extent of the service though the Contract Document may not fully and precisely furnish/specify them. The Tenderer shall deemed to include the requisite services as may be required to complete the Services properly including remedying of any defect therein.

423 SCHEDULE OF RATES TO COVER CONSTRUCTION EQUIPMENTS, MATERIALS,



LABOUR ETC.:

Without in any way limiting the provisions of the preceding sub-clause the Schedule of Rates shall be deemed to include and cover the cost of all construction equipment, temporary work (except as provided for herein), pumps, materials, labour, insurance, fuel, consumables, stores & appliances and such other items / equipments / materials as required for carrying out the services by the Service Provider and all other matters in connection with each item in the Schedule of Rates and the execution of the Service or any portion thereof finished, complete in every respect and maintained as shown or described in the Contract Documents or as may be ordered in writing during the continuance of the Contract.

424 SCHEDULE OF RATES TO COVER ROYALTIES, RENTS AND CLAIMS:

The Schedule of Rates (i.e., Value of Contract) shall be deemed to include and cover the cost of all royalties and fees for the articles and processes, protected by letters, patent or otherwise incorporated in or used in connection with the Service, also all royalties, rents and other payments in connection with obtaining materials of whatsoever kind for the Service and shall include an indemnity to the Employer which the Service Provider hereby gives against all actions, proceedings, claims, damages, costs and expenses arising from the incorporation in or use in the Service of any such articles, processes or materials, octroi or other municipal or local Board Charges, if levied on materials, equipment or machineries to be brought to site for use for Services shall be borne by the Service Provider.

425 SCHEDULE OF RATES TO COVER TAXES AND DUTIES:

No exemption or reduction of Customs Duties, GST, Works Contract Tax or any port dues, transport charges, stamp duties or Central or State Government or local Body or Municipal Taxes or duties, taxes or charges (from or of any other body), entry tax, whatsoever, will be granted or obtained, all of which expenses shall be deemed to be included in and covered by the Schedule of Rates, unless mentioned specifically elsewhere in the Tender Document. The Service Provider shall also obtain and pay for all permits/licenses or other privileges necessary to complete the Service.

426 SCHEDULE OF RATES TO COVER RISKS OF DELAY:

The Schedule of Rates shall be deemed to include and cover the risk of all possibilities of delay and interference with the Service Provider's conduct/peformance of Services which occurs from any causes including orders of the Employer in the exercise of his power and on account of extension of time granted due to various reasons and for all other possible or probable causes of delay.

427 SCHEDULE OF RATES CANNOT BE ALTERED:



For Service under unit rate basis, no alteration will be allowed in the Schedule of Rates by reason of services or any part of them being modified, altered, extended, diminished or committed. The Schedule of Rates are fully inclusive of rates which have been fixed by the Service Provider and agreed to by the Employer and cannot be altered. For lumpsum Contracts, the payment will be made according to the Service actually carried out, for which purpose an item wise, or work wise Schedule of Rates shall be furnished, suitable for evaluating the value of Service provided and preparing running account bill. Payment for any additional Service which is not covered in the Schedule of Rates shall only be released on issuance of Amendment to LOA/Contract by the Employer.

4.3 PROCEDURE FOR BILLING OF SERVICES:

43.1 BILLING PROCEDURE:

Following procedures shall be adopted for billing of services executed by the Service Provider.

- 4.3.1.1 The Bill(s) complete in all respect with details and enclosure(s) is to be submitted by Service Provider in line with terms of the Contract. Employer shall make all endeavour to release payments of undisputed amount of the bills submitted within 15 (Fifteen) days from the date of certification by the Engineer-in-Charge.
- 4.3.12 COMPUTERISED BILLING SYSTEM: GGPL has introduced Computerised Billing System whereby whenever the Bill(s) are submitted in GGPL by a Service Provider, a receipt number is usually generated. The Service Provider may also know the status of the Bill through GGPL's website.

432 MODE OF MEASUREMENT:

The payment shall be made based on the mode of measurement as specified in the Contract. Otherwise, the mode of measurement shall be adopted as per latest Indian Standard Specifications.

4.4 NOTICE OF CLAIMS FOR ADDITIONAL PAYMENTS:

4.1 Should the Service Provider consider that he is entitled to any extra payment for any extra/additional Job(s)/Service(s) or material change in original Specifications carried out by him in respect of job, he shall forthwith give notice in writing to the Engineer-in- Charge that he claims extra payment. Such notice shall be given to the Engineer-in- Charge upon which Service Provider bases such claims and such notice shall contain full particulars of the nature of such claim with full details of amount claimed. Irrespective of any provision in the Contract to the contrary, the Service Provider must intimate his intention to lodge claim on the Employer within 10 (ten) days of the commencement of happening of the event and quantify the claim within 30 (thirty) days, failing which the Service Provider will



lose his right to claim any compensation/reimbursement/damages etc. Failure on the part of Service Provider to put forward any claim without the necessary particulars as above within the time above specified shall be an absolute waiver thereof. No omission by Employer to reject any such claim and no delay in dealing therewith shall be waiver by Employer of any of these rights in respect thereof.

442 Engineer-in-Charge shall review such claims within a reasonable period of time and cause to discharge these in a manner considered appropriate after due deliberations thereon. However, Service Provider shall be obliged to carry on with the Jobs/services during the period in which his claims are under consideration by the Employer, irrespective of the outcome of such claims, where additional payments for Services considered extra are justifiable in accordance with the Contract provisions, Employer shall arrange to release the same in the same manner as for normal job payments. Such of the extra services so admitted by Employer shall be governed by all the terms, conditions, stipulations and specifications as are applicable for the Contract. The rates for extra services shall generally be the unit rates provided for in the Contract. In the event unit rates for extra services so executed are not available as per Contract, payments may either be released on day work basis for which daily/hourly rates for workmen and hourly rates for equipment rental shall apply, or on the unit rate for Services executed shall be derived by interpolation/ extrapolation of unit rates already existing in the Contract. In all the matters pertaining to applicability of rate and admittance of otherwise of an extra service claim(s) of Service Provider, the decision of Engineer-in-Charge shall be final and binding on the Service Provider.

4.5 INSURANCE:

- 45.1 Service Provider shall, at his own expense, arrange appropriate insurance to cover all risks assumed by the Service Provider under this Contract in respect of its personnel deputed under this Contract as well as Service Provider's equipment, tools and any other belongings of the Service Provider or their personnel during the entire period of their engagement in connection with this Contract. Employer will have no liability on this account. The Personnel covered must be covered to meet the liability under Employee Compensation Act.
- The provisions of this Clause shall in no way limit the liability of the Service Provider under the Contract.
- If the Service Provider neglects, fails, or refuses to obtain or maintain insurances required to be effected, or fails to provide certification etc., the Employer has the right to procure and maintain policies at Service Provider's expense plus administrative cost of 10% of the amount of Insurance premium.

45.4 INSURANCE TYPES:



Service Provider shall at all time during the currency of the Contract provide, pay for and maintain the following insurance amongst others:

- a Employee Compensation and Employer's common law liability insurance covering liability to employees of the Service Provider under the laws of their place or employment or place or injury, arising out of injury sustained in connection with any of the services. This insurance will be extended where submitted by law, to indemnify the Employer against any statutory liability which it may incur towards injured employees of the Service Provider. A proof of the same should be submitted to EIC for liability in line with Employees Compensation Act.
- b. General Public Liability Insurance covering liabilities including contractual liability for bodily injury, including death of persons, and liabilities for damage of property. This insurance must cover all operations of Service Provider required to fulfill the provisions under this Contract.
- c. Service Provider's Equipment/Materials/Goods used for execution of the work hereunder shall have an insurance cover with a suitable limit (as per international standards).
- d Automobile Public Liability Insurance covering owned, non-owned and hired automobiles used in the performance of the work hereunder, with bodily injury limits and property damage limits as governed by Indian Insurance regulations.
- e. Public Liability Insurance as required under Public Liability Insurance Act 1991.
- Service Provider shall obtain additional insurance or revise the limits of existing insurance as per Employer's request in which case additional cost shall be to Service Provider's account.

Further, the Service Provider shall ensure the adequacy of Insurance at all time in accordance with the nature of the Service(s), terms of the Contract and Statutory requirements.

45.6 CERTIFICATE OF INSURANCE:

Before commencing performance of the services, Service Provider shall on request furnish EIC/Employer with certificates of insurance indicating:

- i) type and amounts of insurance as required herein;
- ii) insurance company or companies carrying the aforesaid coverage;
- iii) effective and expiry dates of policies;
- iv) that the Employer may give advance notice for any material change in the policy. waiver of subrogation endorsement has been attached to all policies; and



- v) the territorial limits of all policies.
- 45.7 If any of the above policies expire or are cancelled during the terms of the service, and Service Provider fails for any reason to renew such policies, the Employer may replace same and recover the charges towards premium plus administrative charges from Service Provider. Should there be a lapse in any insurance required to be carried out by the Service Provider hereunder for any reason, losses & penalty, if any resulting there from shall be to the sole account of the Service Provider.
- 45.8 Service Provider shall require all its Sub-Service Providers to provide such foregoing insurance cover as the Service Provider is obligated to provide under the Contract.
- WAIVER OF SUBROGATION: All insurance policies of the Service Provider with respect to the operations conducted hereunder, shall be endorsed by the underwriter in accordance with the following policy wording: "The insurers hereby waive their rights of subrogation against any individual, Employer, affiliates or assignees for whom or with whom the assured may be operating to the extent of the Contractual indemnities undertaken by the Service Provider".
- 45.10 Deductible: That portion of any loss not covered by insurance provided for in this article solely by reason of deductible provision in such insurance policies shall be to the account of the Service Provider.

4.6 TAXES AND DUTIES:

- 4.6.1 The Service Provider, unless specified otherwise elsewhere in the Contract agrees to and does hereby accept full and exclusive liability for the payment of any and all Taxes, Duties, including GST now or hereafter imposed, increased, modified from time to time in respect of Services and materials and all contributions and taxes for unemployment compensation, insurance and old age pensions or annuities now or hereafter imposed by any Central or State Government authorities which are imposed with respect to or covered by the wages, salaries, or other compensations paid to the persons employed by the Service Provider and the Service Provider shall be responsible for the compliance of all Sub-Service Providers, with all applicable Central, State, Municipal and local law and regulation and requirement of any Central, State or local Government agency or authority. Service Provider further agrees to defend, indemnify and hold Employer harmless from any liability or penalty which may be imposed by the Central, State or Local authorities by reason or any violation by Service Provider or Sub-Sub-Service Provider of such laws, suits or proceedings that may be brought against the Employer arising under, growing out of, or by reason of the service provided for by this Contract, by third parties, or by Central or State Government authority or any administrative sub- division thereof. Tax deductions will be made as per the rules and regulations in force in accordance with acts prevailing from time to time.
- 4.62 Service Provider shall ensure timely submission of correct invoice(s) with all required



supporting document(s) as per Contract within a period specified in Contracts to enable Employer to avail Input Tax Credit.

If Input Tax credit with respect to GST is not available to Employer for any reason which is not attributable to Employer, then Employer shall not be obligated or liable to pay or reimburse GST charged in the invoice(s) and shall be entitled to / deduct/ setoff /recover the such GST together with all penalties and interest if any, against any amounts paid or payable by Employer to Service Provider.

4.63 Where Employer has the obligation to discharge tax liability under reverse charge mechanism and Employer has paid or is /liable to pay GST to the Government on which interest or penalties becomes payable as per rules (as amended from time to time) for any reason which is not attributable to Employer or Input Tax credit with respect to such payments is not available to Employer for any reason which is not attributable to Employer, then Employer shall be entitled to deduct/ setoff / recover such amounts against any amounts paid or payable by Employer to Service Provider.

4.7 INCOME TAX:

- 4.7.1 Income Tax deduction shall be made from all payments of the Service Provider as per rules and regulation in force in accordance with the Income Tax Act prevailing from time to time. As per the provisions of the income Tax Act, 1961, Permanent Account No. (PAN) is compulsorily required to be mentioned in Tax Deduction at Source (TDS) certificate issued to the payee. Therefore, the bidder must submit the details of PAN / the copy of application filed for allotment of PAN (if PAN no. not available) to EIC immediately on receipt of FOA/Contract Document, failing which, TDS will be applied as per applicable law and TDS certificate will not be issued. Therefore, in case the Service Provider does not furnish PAN, EMPLOYER shall deduct at source as provided in the Income Tax Act 1961, or in the relevant Finance Act, or as directed in the orders u/s 195(3) or 197 or 195(2), as the case may be, or at such higher rate as may be required by Section 206AA of Income Tax Act 1961, from time to time.
- In case of foreign bidder, the Service Provider must apply through the local embassy / consulate of India for obtaining PAN card. In case, foreign Service Provider don't have the PAN, then amount will be deducted and deposited as per law and TDS certificate will also not be provided. Further, such Service Provider shall comply all other provisions mentioned elsewhere in the Tender Document related to making remittances to non-residents including Permanent Establishment, Tax Residency Certificate (TRC) if non-resident desire to avail benefits available under Double Tax Avoidance Agreement (DTAA), Withholding Tax etc., as per Income Tax Act, 1961 (as amended from time to time).

4.8 STATUTORY VARIATIONS:



- 481 All duties, taxes (except where otherwise expressly provided in the Contract) as may be levied / imposed in consequences of execution of the Jobs/Services or in relation thereto or in connection therewith as per the Acts, Laws, Rules, Regulations in force on the due date of submission of Bid for this Contract shall be to Service Provider's account. Any increase / decrease in such duties, taxes after the due date of submission of bid but within the Contractual completion date as stipulated in the Contract will be to the account of Employer subject to submission of documentary proof to the satisfaction of Employer.
- Any increase in the duties and taxes after the Contractual completion period will be to the Service Provider's account, where delay in completion /mobilization period is attributable to the Service Provider and the taxes & duties are not cenvatable (i.e. Input Tax Credit (ITC) not available). In case of applicability of ITC cenvatable taxes & duties, payment shall be made as per the prevailing rates during the currency of the Contract. However, any benefit of decrease in duties and taxes after the Contractual completion will be passed on to the Employer.
- In the event of introduction of any new legislation or any change or amendment or enforcement of any Act or Law, rules or regulations of Government of India or State Government(s) or Public Body which becomes effective after the due date of submission of Bid for this Contract but within the Contractual completion period (including extended period allowed due to reasons attributed to Employer) and which results in increased cost of the jobs/services under the Contract through increased liability of taxes, (other than personnel and Corporate taxes), duties, the Service Provider shall be indemnified for any such increased cost by the Employer subject to the production of documentary proof to the satisfaction of the Employer to the extent which directly is attributable to such introduction of new legislation or change or amendment as mentioned above and adjudication by the competent authority & the courts wherever levy of such taxes / duties are disputed by Employer.
- 4.84 Similarly, in the event of introduction of new legislation or any change or amendment or enforcement of any Act or Law, rules or regulations of Government of India or State Government(s) or Public Body which becomes effective after the due date of submission of Bid for this Contract and which results in any decrease in the cost of the services/ jobs through reduced liability of taxes, (other than personnel and Corporate taxes) duties, the Service Provider shall pass on the benefits of such reduced cost, taxes or duties to the Employer, to the extent which is directly attributable to such introduction of new legislation or change or amendment as mentioned above.

4.9 DAMAGES TO PROPERTY, ANY PERSON AND THIRD PARTY

i) Service Provider shall be responsible for making good to the satisfaction of the Employer any loss or any damage to structures and properties belonging to the Employer or being executed or procured or being procured by the Employer or of other agencies within in the premises of the Employer, if such loss or damage is



due to fault and/or the Negligence or Willful Misconduct or omission of the Service Provider, his employees, agents, representatives or Sub-Service Providers.

- The Service Provider shall take sufficient care in moving his equipments and materials from one place to another so that they do not cause any damage to any person or to the property of the Employer or any third party including overhead and underground cables and in the event of any damage resulting to the property of the Employer or of a third party during the movement of the aforesaid equipment or materials the cost of such damages including eventual loss of production, operation or services in any plant or establishment as estimated by the Employer or ascertained or demanded by the third party shall be borne by the Service Provider. Third party liability risk shall be Rupees One lakh for single accident and limited to Rupees Ten lakhs.
- The Service Provider shall indemnify and keep the Employer harmless of all claims for damages to property other than Employer's property arising under or by reason of this agreement, if such claims result from the fault and/or Negligence or Willful Misconduct or omission of the Service Provider, his employees, agents, representative of Sub-Service Provider.



SECTION - V

5.0 LAWS, HEALTH, SAFETY & ENVIRONMENT

5.1 LABOUR LAWS:

- i) No labour below the age of 18 (eighteen) years shall be employed on the Job.
- ii) The Service Provider shall not pay less than what is provided under law to labourers engaged by him on the Job.
- iii) The Service Provider shall at his expense comply with all labour laws and keep the Employer indemnified in respect thereof.
- iv) The Service Provider shall pay equal wages for men and women in accordance with applicable labour laws.
- v) If the Service Provider is covered under the Contract labour (Regulation and Abolition) Act, he shall obtain a license from licensing authority (i.e. office of the labour commissioner) by payment of necessary prescribed fee and the deposit, if any, before starting the Job under the Contract. Such fee/deposit shall be borne by the Service Provider.
- vi) The Service Provider shall employ labour in sufficient numbers either directly or through Sub- Service Provider's to maintain the required rate of progress and of quality to ensure workmanship of the degree specified in the Contract while also ensuring that workman is not stressed due to long hour of working and to the satisfaction of the EIC.
- vii) The Service Provider shall furnish to the EIC the distribution return of the number and description, by trades of the service people employed on the services. The Service Provider shall also submit on the 4th and 19th of every month to the EIC a true statement showing in respect of the second half of the preceding month and the first half of the current month (1) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them and (2) the number of female workers who have been allowed Maternity Benefit as provided in the Maternity Benefit Act 1961 on Rules made thereunder and the amount paid to them.
- viii) The Service Provider shall comply with the provisions of the payment of Wage Act 1936, Employee Provident Fund Act 1952, Minimum Wages Act 1948. Employers Liability Act 1938. Servicemen's Compensation Act 1923, Industrial Disputes Act 1947, the Maternity Benefit Act 1961 and Contract Labour Regulation and Abolition Act 1970, Employment of Children Act 1938 or any modifications



thereof or any other law relating thereto and rules made thereunder from time to time.

- The EIC shall on a report having been made by an Inspecting Officer as defined in Contract Labour (Regulation and Abolition) Act 1970 have the power to deduct from the money due to the Service Provider any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfilment of the Conditions of the Contract for the benefit of workers, non-payment of wages or of deductions made from his or their wages which are not justified by the terms of the Contract or non-observance of the said regulations.
- X) The Service Provider shall indemnify the Employer against any payments to be made under and for the observance of the provisions of the aforesaid Acts without prejudice to his right to obtain indemnity from his Sub-Service Provider's. In the event of the Service Provider committing a default or breach of any of the provisions of the aforesaid Acts as amended from time to time, of furnishing any information or submitting or filling and Form/ Register/ Slip under the provisions of these Acts which is materially incorrect then on the report of the inspecting Officers, the Service Provider shall without prejudice to any other liability pay to the Employer a sum not exceeding Rs.10000.00 as Liquidated Damages for every default, breach or furnishing, making, submitting, filling materially incorrect statement as may be fixed by the EIC and in the event of the Service Provider's default continuing in this respect, the Liquidated Damages may be enhanced to Rs.5000.00 per day for each day of default subject to a maximum of one percent of the estimated cost of the Services put to the Contract. The EIC shall deduct such amount from bills or Contract Performance Security of the Service Provider and credit the same to the Welfare Fund constitute under these acts. The decision of the EIC in this respect shall be final and binding.

5.2 SAFETY REGULATIONS:

- i) In respect of all labour, directly employed in the Service for the performance of Service Provider's part of this agreement, the Service Provider shall at his own expense arrange for all the safety provisions as per safety codes of C.P.W.D., Indian Standards Institution. The Electricity Act, The Mines Act and such other acts as applicable.
- ii) The Service Provider shall observe and abide by all fire and safety regulations of the Employer. Before starting service, Service Provider shall consult with Employer's safety Engineers or EIC and must make good to the satisfaction of the Employer any loss or damage due to fire to any portion of the service done or to be done under this agreement or to any of the Employer's existing property.

5.3 FIRST AID AND INDUSTRIAL INJURIES:



- i) Service Provider shall maintain first aid facilities for its employees and those of its Sub-Service Provider.
- ii) Service Provider shall make outside arrangements for ambulance service and for the treatment of industrial injuries. Names of those providing these services shall be furnished to Employer prior to start and their telephone numbers shall be prominently posted in Service Provider's field office.
- iii) All critical industrial injuries shall be reported promptly to Employer, and a copy of Service Provider's report covering each personal injury requiring the attention of a physician shall be furnished to the Employer.

5.4 GENERAL RULES:

5.4.1 Smoking within the battery area, tank farm, dock limits or any such area identified by EIC or mentioned in SCC or any guideline, is strictly prohibited. Violators of the no smoking rules shall be discharged immediately after imposing the applicable penalty(ies). Decision of EIC in the matter shall be final and binding on the Service Provider.

5.5 CARE IN HANDLING INFLAMMABLE GAS:

5.5.1 The Service Provider has to ensure all precautionary measures and exercise utmost care in handling the inflammable gas cylinder/inflammable liquids/paints etc. as required under the law and/or as advised by the fire Authorities of the Employer.

5.6 PRESERVATION OF PLACE:

5.6.1 The Service Provider shall take requisite precautions and use his best endeavors to prevent any riotous or unlawful behavior by or amongst his worker / personnel employed for the services and for the preservation of peace and protection of the inhabitants and security of property in the neighborhood of the Site. In the event of the Employer requiring the maintenance of a Special Police Force at or in the vicinity of the site during the tenure of services, the expenses thereof shall be borne by the Service Provider and if paid by the Employer shall be recoverable from the Service Provider.

5.7 ENVIRONMENT:

5.7.1 Employer acknowledges their commitment to conduct their respective operations in a manner which not only complies with all relevant environmental protection and pollution control legislation but also such operations do not cause environmental damage or pollution and in a manner which acknowledges other cultural and associated considerations. In recognition of this commitment, the Service Provider shall perform the services in such a way as to avoid or minimize environmental damage or pollution and fully recognize the



special aspects of the environment as communicated by Employer or as applicable. Service Provider shall comply with, and the Service Provider shall ensure compliance with all applicable environmental protection and pollution control legislation as it relates to the services.

- 5.7.2 In the furtherance of any laws, regulations and rules promulgated by the Government of India, Service Provider shall:
 - Employ good international oil & gas industry practices, including as required, advanced techniques, practices and methods of operation for the prevention of environmental damage in conducting the job;
 - Take necessary and adequate steps to prevent environmental damage and, where some adverse impact on the environment is unavoidable, minimize such damage and the consequential effects thereof of property and people; and
 - Adhere to the guidelines, limitations or restrictions, if any, imposed by the environmental clearance as applicable.
- 5.7.3 If during the Service Provider's performance of the services, the Employer is of the opinion that the Service Provider is either not conducting the services in strict compliance with this Contract or is conducting the services in such a way as to endanger the environment or in such a way as to risk being in breach of any environmental protection or pollution control legislation, then the Employer shall notify the Service Provider in writing of the conduct involved and the Service Provider shall initiate corrective action to the reasonable satisfaction of the Employer within twenty four (24) hours of the conduct so notified or as decided by EIC. Employer may, require Service Provider to discontinue the Service in whole or in part until Service Provider has taken such action.
- 5.7.4 The Service Provider shall notify the Employer as soon as reasonably practicable of any spillage or potential spillage of petroleum or any act of pollution or potentially polluting event. For each and any such event the Service Provider shall record the relevant information on the incident report form and shall deliver the completed form to the Employer forthwith.
- 5.7.5 After completion of the entire job as per this Contract and prior to Demobilization, Service Provider shall at its expense satisfactorily dispose off all rubbish, remove all temporary work, equipment and materials belonging to Service Provider and return to Employer warehouse all surplus spares and salvageable Employer supplied materials. Further, the Service Provider can take away the brought out Service Provider supplied surplus Material (i.e. Materials brought by the Service Provider for work/Services at site under Contract, not used by them for work/Services and leftover at the Site) subject to prior written consent of the EIC. The payment made, if any, towards such surplus Material will be recovered from the payment of Service Provider.



Service Provider shall leave the premises in a neat and safe condition. Service Provider shall be required to leave all, sites and surrounding area as it existed at the commencement of Contract.

5.7.6 Service Provider shall:

Ensure that the pertinent completed environmental impact studies including the Rapid Environmental Impact Assessment carried out by Employer are made available to its Personnel and to its Sub-Service Providers to develop adequate and proper awareness of the measures and methods of environmental protection to be used in carrying out the job;

Ensure and maintain at his own cost all lights, guards, fencing, warning signs and watching, when and where necessary or required by the EIC, for the protection of the Services or for the safety and convenience of the public or others.

Ensure that the Contracts entered into between Service Provider and its Sub Service Providers (if allowed) relating to the Services shall include the provisions stipulated herein;

- be responsible for the removal from the Site or for otherwise making safe in accordance with applicable Indian laws and directives any materials generated or released by Service Provider during its activities at the Site which are toxic or similarly hazardous to the health or safety of persons or to the environment;
- be liable for and shall indemnify, protect, defend and hold harmless Employer from and against any and all demands, claims, suits and causes of action and any and all liability, costs, expenses, settlements and judgments incurred in connection therewith (including court costs and attorney's fees incurred by Employer) arising out of such toxic or hazardous materials for which the Service Provider is responsible pursuant to this Clause.



SECTION - VI

6.0 DISPUTE RESOLUTION AND ARBITRATION:

6.1 DISPUTE RESOLUTION:

- 6.1.1 GGPL has framed the Conciliation Rules 2010 in conformity with supplementary to Part III of the Indian Arbitration and Conciliation Act 1996 for speedier, cost effective and amicable settlement of disputes through conciliation. A copy of the said rules made available on GGPL's web site www.godavarigas.in for reference. Unless otherwise specified, the matters where decision of the Engineer-in-Charge is deemed to be final and binding as provided in the Contract and the issues/disputes which cannot be mutually resolved within a reasonable time, all disputes shall be settled in accordance with the Conciliation Rules 2010.
- Any dispute(s)/difference(s)/issue(s) of any kind whatsoever between/amongst the Parties arising under/out of/in connection with this Contract shall be settled in accordance with the aforesaid rules.
- 6.1.3 In case of any dispute(s)/difference(s)/issue(s), a Party shall notify the other Party (ies) in writing about such a dispute(s) / difference(s) / issue(s) between / amongst the Parties and that such a Party wishes to refer the dispute(s)/ difference(s)/issue(s) to Conciliation. Such Invitation for Conciliation shall contain sufficient information as to the dispute(s)/difference(s)/issue(s) to enable the other Party (ies) to be fully informed as to the nature of the dispute(s)/ difference(s) /issue(s), the amount of monetary claim, if any, and apparent cause(s) of action.
- 6.1.4 Conciliation proceedings commence when the other Party(ies) accept(s) the invitation to conciliate and confirmed in writing. If the other Party (ies) reject(s) the invitation, there will be no conciliation proceedings.
- 6.1.5 If the Party initiating conciliation does not receive a reply within thirty days from the date on which he/she sends the invitation, or within such other period of time as specified in the invitation, he/she may elect to treat this as a rejection of the invitation to conciliate. If he/she so elects, he/she shall inform the other Party(ies) accordingly.
- 6.1.6 Where Invitation for Conciliation has been furnished, the Parties shall attempt to settle such dispute(s) amicably under Part-III of the Indian Arbitration and Conciliation Act, 1996 and GGPL Conciliation Rules, 2010. It would be only after exhausting the option of Conciliation as an Alternate Dispute Resolution Mechanism that the Parties hereto shall go for Arbitration in terms of clause no. 6.2. For the purpose of this clause, the option of 'Conciliation' shall be deemed to have been exhausted, even in case of rejection of 'Conciliation' by any of the Parties.



- 6.1.7 The cost of Conciliation proceedings including but not limited to fees for Conciliator(s), Airfare, Local Transport, Accommodation, cost towards conference facility etc. shall be borne by the Parties in equal share.
- 6.1.8 The Parties shall freeze claim(s) of interest, if any, and shall not claim the same during the pendency of Conciliation proceedings. The Settlement Agreement, as and when reached/agreed upon, shall be signed between the Parties and Conciliation proceedings shall stand terminated on the date of the Settlement Agreement.

6.2 ARBITRATION:

6.2.1 If the issues/disputes which cannot be resolved through dispute resolution mechanism pursuant to clause no. 6.1, all disputes such shall be referred to arbitration by Sole Arbitrator. The Employer shall suggest a panel of three independent and distinguished persons to the /Service Provider to select any one among them to act as the Sole Arbitrator. In the event of failure of the other parties to select the Sole Arbitrator within 30 days from the receipt of the communication suggesting the panel of arbitrators, the right of selection of the sole arbitrator by the other party shall stand forfeited and the Employer shall have discretion to proceed with the appointment of the Sole Arbitrator. The decision of Employer on the appointment of the sole arbitrator shall be final and binding on the parties. The award of sole arbitrator shall be final and binding on the parties and unless directed/awarded otherwise by the sole arbitrator, the cost of arbitration proceedings shall be shared equally by the parties. The Arbitration proceedings shall be in English language and seat/venue shall be Rajahmundry, Andhra Pradesh, India. Subject to the above, the provisions of Indian Arbitration & Conciliation Act 1996 and the Rules and amendment thereof shall be applicable. All matter relating to this Contract are subject to the exclusive jurisdiction of the court situated in the state of Andhra Pradesh, India.

Contractor may please note that the Arbitration & Conciliation Act 1996 was enacted by the Indian Parliament and is based on United Nations Commission on International Trade Law (UNCITRAL model law), which were prepared after extensive consultation with Arbitral Institutions and centers of International Commercial Arbitration. The United Nations General Assembly vide resolution 31/98 adopted the UNCITRAL Arbitration rules on 15 December 1976.

Notwithstanding anything contained contrary in GCC and other Contract Documents, in case it is found that the Bidder/Service Provider indulged in fraudulent/ coercive practices at the time of bidding or during execution of the contract as mentioned in "Procedure for action in case of Corrupt/ Fradulent/ Collusive /Coersive Practices", the Service Provider / Bidder shall be banned (in terms of aforesaid procedure) from the date of issuance of such order for banning.

The Bidder/Service Provider understands and agrees that in such cases of banning, the



decision of Employer shall be final and binding on such Bidder/Service Provider and the Arbitration Clause mentioned in the GCC and other Contract Documents shall not be applicable for any issue /dispute arising in the matter.

6.2.2 SETTLEMENT OF COMMERCIAL DISPUTES BETWEEN PUBLIC SECTOR ENTERPRISE(S) INTER SE AND PUBLIC SECTOR ENTERPRISE(S) AND GOVERNMENT DEPARTMENT (S) THROUGH ADMINISTRATIVE MECHANISM FOR RESOLUTION OF CPSEs DISPUTES (AMRCD) IN THE DEPARTMENT OF PUBLIC ENTERPRISES:

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs) inter se and also between CPSEs and Government Departments / Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 4(1)/2013-DPE (GM) / FTS-1835 dated 22.05.2018.

6.3 JURISDICTION:

6.3.1 The Contract shall be governed by and constructed according to the laws in force in India. The Service Provider hereby submits to the jurisdiction of the Courts situated at Andhra Pradesh only for the purposes of disputes, actions and proceedings arising out of the Contract and it is agreed that the Courts at Andhra Pradesh only will have the exclusive jurisdiction to hear and decide such disputes, actions and proceedings.

6.4 CONTINUANCE OF THE CONTRACT:

Notwithstanding the fact that settlement of dispute(s) (if any) may be pending, the parties hereto shall continue to be governed by and perform the Services in accordance with the provisions under this Contract.



Appendix -1

PROCEDURE FOR ACTION IN CASE OF CORRUPT /FRAUDULENT/COLLUSIVE/COERCIVE PRACTICES

A Definitions:

- A.1 "Corrupt Practice" means the offering, giving, receiving or soliciting, directly or indirectly, anything of value to improperly influence the actions in selection process or in contract execution.
 - "Corrupt Practice" also includes any omission for misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided.
- A2 "Fraudulent Practice" means and include any act or omission committed by a agency or with his connivance or by his agent by misrepresenting/ submitting false documents and/ or false information or concealment of facts or to deceive in order to influence a selection process or during execution of Contract/ order.
- A3 "Collusive Practice amongst bidders (prior to or after bid submission)" means a scheme or arrangement designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- A.4 "Coercive practice" means impairing or harming or threatening to impair or harm directly or indirectly, any agency or its property to influence the improperly actions of an agency, obstruction of any investigation or auditing of a procurement process.
- A.5 "Bidder/Service Provider" is herein after referred as "Agency"
- A.6 "Appellate Authority" shall mean Employer's committee of Directors consisting of Director (Finance) and Director (BD) for works centers under Director (Projects). For all other cases committee of Directors shall consist of Director (Finance) & Director (Projects).
- A.7 "Competent Authority" shall mean the authority, who is competent to take final decision for Suspension of business dealing with an Agency/ ies and Banning of business dealings with Agency/ iesand shall be the "Director" concerned.
- A.8 "Allied Agency" shall mean all the concerns within the sphere of effective influence of banned/ suspended agencies. In determining this, the following factors may be taken into consideration:
 - (a) Whether the management is common;
 - (b) Majority interest in the management is held by the partners or directors of banned/suspended firm.
 - (c) substantial or majority shares are owned by banned/ suspended agency and by virtue



of this it has a controlling voice.

A.9 "Investigating Agency" shall mean any department or unit of GGPL investigating into the conduct of Agency/ party and shall include the Vigilance Department of the GGPL, Central Bureau of Investigation, State Police or any other agency set up by the Central or state government having power to investigate.

B Actions against bidder(s) indulging in corrupt /fraudulent/ collusive/ coercive practice

B.1 Irregularities noticed during the evaluation of the bids:

If it is observed during bidding process/ bids evaluation stage that a bidder has indulged in corrupt/fraudulent/collusive/coercive practice, the bid of such Bidder (s) shall be rejected and its Earnest Money Deposit (EMD) shall be forfeited.

Further, such agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2 Irregularities noticed after award of Contract

(i) During execution of contract:

If an agency, is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, during execution of Contract, the Agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

The concerned order (s)/ contract(s) where corrupt/fraudulent/collusive practices is observed, shall be suspended with immediate effect by EIC/ Employer whereby the supply/ work/ service and payment etc. will be suspended. The action shall be initiated for putting the Agency on banning.

After conclusion of process, the order (s)/ contract (s) where it is concluded that such irregularities have been committed shall be terminated and Contract cum Performance Bank Guarantee (CPBG) /CPS submitted by Agency against such order (s)/ contract (s) shall also be forfeited. The amount that may have become due to the contractor on account of work already executed by him shall be payable to the contractor and this amount shall be subject to adjustment against any amounts due from the Service Provider under the terms of the Contract.

No risk and cost provision will be enforced in such cases.

(ii) After execution of Contract and during Defect Liability Period (DLP)/ Warranty/Guarantee Period:



If an Agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after execution of contract and during DLP/ Warranty/Guarantee Period, the Agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

Further, the Contract cum Performance Bank Guarantee (CPBG)/CPS submitted by Agency against such order (s)/ contract (s) shall be forfeited.

(iii) After expiry of Defect liability period (DLP)/ Warranty/Guarantee Period

If an Agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after expiry of Defect liability period (DLP)/ Warranty/Guarantee Period, the Agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2.2 Period of Banning

The period of banning of agencies indulged in Corrupt/Fraudulent/Collusive/Coercive Practices shall be as under and to be reckoned from the date of banning order:

Sl. No.	Description	Period of banning from the date of issuance of Banning Order
1	Misrepresentation/False information other than pertaining to BEC of tender but having impact on the selection process.	02 years
	For example, if an agency confirms not being in holiday/ banning list of PSUs/ Govt. Dept., liquidation, bankruptcy & etc. and subsequently it is found otherwise, such acts shall be considered in this category.	
2	Corrupt/Fraudulent (pertaining to BEC of tender) /Collusive/Coercive Practices	03 years
2.1	If an agency again commits Corrupt/Fraudulent (pertaining to BEC of tender) /Collusive/ Coercive Practices in subsequent cases after their banning, such situation of repeated offense to be dealt with more severity and following shall be the period of banning:	
	(i) Repeated once	7 years (in addition to the period already served)
	(vi) Repeated twice or more	15 years (in addition to the period already served)



3	Indulged in unauthorized disposal of materials provided by GGPL	7 years
4	If act of vendor/ contractor is a threat to the National Security	15 years

C Effect of banning on other ongoing contracts/ tenders

- C.1 If an Agency is put on Banning, such Agency should not be considered in ongoing tender's/future tenders.
- C.2 However, if such an Agency is already executing other order (s)/ contract (s) where no corrupt/fraudulent/ collusive/coercive practice is found, the Agency should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract.
- C.3 If an Agency is put on the Banning List during tendering and no irregularity is found in the case under process:
- C.3.1 after issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the Agency shall be ignored.
- C.3.2 after opening Technical bid but before opening the Price bid, the Price bid of the Agency shall not be opened and BG/EMD submitted by the Agency shall be returned to the Agency.
- C.3.3 after opening of price, BG/EMD made by the Agency shall be returned; the offer of the Agency shall be ignored & will not be further evaluated. If the Agency is put on banning list for fraud/ mis-appropriation of facts committed in the same tender/other tender where errant Agency emerges as the lowest (L1), then such tender shall also be cancelled and reinvited.

D. Procedure for Suspension of Bidder

D.1 Initiation of Suspension

Action for suspension business dealing with any agency/(ies) shall be initiated when

- (i) Corporate Vigilance Department, GGPL based on the fact of the case gathered during investigation by them recommend for specific immediate action against the Agency.
- (ii) Corporate Vigilance Department, GGPL based on the input from Investigating agency, forward for specific immediate action against the Agency.
- (iii) Nonperformance of Bidder/Service Provider leading to termination of Contract/Order.

D.2 Suspension Procedure:

D2.1 The order of suspension would operate initially for a period not more than six months and shall be communicated to the Agency and also to Corporate Vigilance Department.



Period of suspension can be extended with the approval of the Competent Authority by one month at a time with a ceiling of six months pending a conclusive decision to put the Agency on banning list.

- D22 During the period of suspension, no new business dealing shall be held with the Agency.
- D23 Period of suspension shall be accounted for in the final order passed for banning of business with the Agency.
- D2.4 The decision regarding suspension of business dealings shall also be communicated to the Agency.

D 3 Effect of Suspension of business:

Effect of suspension on other on-going/future tenders will be as under:

- D3.1 No enquiry/bid/tender shall be entertained from an Agency as long as the name of Agency appears in the Suspension List.
- D32 If an Agency is put on the Suspension List during tendering:
- D32.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the Agency shall be ignored.
- D322 After opening Technical bid but before opening the Price bid, the Price bid of the Agency shall not be opened and BG/EMD submitted by the Agency shall be returned to the Agency.
- D323 After opening of price, BG/EMD made by the Agency shall be returned; the offer of the Agency shall be ignored & will not be further evaluated. If the Agency is put on Suspension list for fraud/mis-appropriation of facts conducted in the same tender/other tender where errant Agency emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.
- D33 The existing contract (s)/ order (s) under execution shall continue.
- D3.4 Tenders invited for procurement of goods, works, services and consultancy services shall have provision that the bidder shall submit a undertaking to the effect that (i) neither the bidder themselves nor their allied Agency/(ies) are on banning list of GAIL or the Ministry of Petroleum and Natural Gas and (ii) bidder is not banned by any Government department/ Public Sector.

F. Appeal against the Decision of the Competent Authority:

- F.1 The Agency may file an appeal against the order of the Competent Authority for putting the Agency on banning list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the of receipt of banning order.
- F2 Appellate Authority would consider the appeal and pass appropriate order which shall be



communicated to the party as well as the Competent Authority.

- F3 Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- **G.** Wherever there is contradiction with respect to terms of 'Integrity pact', GCC and 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice', the provisions of 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice' shall prevail.



Appendix 2

PROCEDURE FOR EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS

1.0 **GENERAL**

A system for evaluation of Vendors/ Suppliers/Contractors/ Consultants (referred elsewhere as "Service Provider") and their performance is a key process and important to support an effective purchasing & contracting function of an organization.

Performance of all participating Vendors/ Suppliers/Contractors/ Consultants need to be closely monitored to ensure timely receipt of supplies from a Vendor, completion of an assignment by a Consultant or complete execution of order by a contractor within scheduled completion period. For timely execution of projects and meeting the operation & maintenance requirement of operating plants, it is necessary to monitor the execution of order or contracts right from the award stage to completion stage and take corrective measures in time.

2.0 **OBJECTIVE**

The objective of Evaluation of Performance aims to recognize, and develop reliable Vendors/ Suppliers/Contractors/ Consultants so that they consistently meet or exceed expectations and requirements.

The purpose of this procedure is to put in place a system to monitor performance of Vendors/ Suppliers/Contractors/ Consultants associated with GGPL so as to ensure timely completion of various projects, timely receipt of supplies including completion of works & services for operation and maintenance of operating plants and quality standards in all respects.

3.0 METHODOLOGY

i) Preparation of Performance Rating Data Sheet

Performance rating data Sheet for each and every Vendor/ Supplier/Contractor/ Consultant for all orders/Contracts with a value of Rs. 7 Lakhs and above is recommended to be drawn up. These data sheets are to be separately prepared for orders/ contracts related to Projects and O&M. Format, Parameters, Process, responsibility for preparation of Performance Rating Data Sheet are separately mentioned.

ii) Measurement of Performance



Based on the parameters defined in Data Sheet, Performance of concerned Vendor/ Supplier/Contractor/ Consultant would be computed and graded accordingly. The measurement of the performance of the Party would be its ability to achieve the minimum scoring of 60% points in the given parameters.

iii) Initiation of Measures:

Depending upon the Grading of Performance, corrective measures would be initiated by taking up the matter with concerned Vendor/ Supplier/Contractor/ Consultant. Response of Vendor/ Supplier/Contractor/ Consultant would be considered before deciding further course of action.

iv) Implementation of Corrective Measures:

Based on the response of Vendor/ Supplier/Contractor/ Consultant, concerned Engineer-in-Charge for the Projects and/or OIC in case of O&M would recommend for continuation or discontinuation of such party from the business of GGPL.

v) Orders/contracts placed on Proprietary/OEM basis for O&M will be evaluated and, if required, corrective action will be taken for improvement in future.

4.0 EXCLUSIONS:

The following would be excluded from the scope of evaluation of performance of Vendors/Suppliers/Contractors/ Consultants:

- i) Orders/ Contracts below the value of Rs. 7 Lakhs.
- ii) One time Vendor/ Supplier/Contractor/ Consultant.
- iii) Orders for Misc./Administrative items/ Non stock Non valuated items.

However, concerned Engineer-in-Charge /OICs will continue to monitor such cases so as to minimize the impact on Projects/O&M plants due to non performance of Vendors/Suppliers/Contractors/ Consultants in all such cases.

5.0 PROCESS OF EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS

5.1 FOR PROJECTS

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of PROJECTS shall be done immediately with commissioning of any Project.
- ii) On commissioning of any Project, EIC (Engineer-in-charge)/ Project-in-charge



shall prepare a Performance Rating Data Sheet (Format at Annexure-1) for all Orders and Contracts.

iii) Depending upon the Performance Rating, following action shall be initiated by Engineer-in-charge/Project-in-charge:

Sl.No.	Performance	Action
	Rating	
1	POOR	Seek explanation for Poor performance
2	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving
		performance in future
4	VERY GOOD	No further action

- iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where Performance rating is "POOR":

Recommend such defaulting Vendor/ Supplier/Contractor/ Consultant for putting on Holiday for a period from one to three years as given below:

- (i) Poor Performance due to reasons other than Quality : One Year
- (ii) Poor Performance on account of Quality (if any mark obtained against Quality parameter is less than 30): **Two Years**
- (iii) Poor Performance leading to termination of contract or Offloading of contract due to poor performance solely attributable to Vendor/Supplier/Contractor/Consultant or Repeated Offence: **Three Years**

Non performance of a Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order, such Vendor/ Supplier/ Contractor/ Consultant are also to be considered for Suspension.

(B) Where Performance rating is "FAIR":

Issuance of warning to such defaulting Vendor/ Supplier/Contractor/ Consultant to improve their performance.

5.2 FOR CONSULTANCY JOBS



Monitoring and Evaluation of consultancy jobs will be carried out in the same way as described in para 5.1 for Projects.

5.3 FOR OPERATION & MAINTENANCE

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of Operation and Maintenance shall be done immediately after execution of order/contract.
- ii) After execution of orders a Performance Rating Data Sheet (Format at Annexure-2) shall be prepared for Orders by Site C&P and for Contracts/Services by respective Engineer-In-Charge.
- ii) Depending upon Performance Rating, following action shall be initiated:

Sl. No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2.	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future.
4	VERY GOOD	No further action

- iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where performance rating is "POOR"

Recommend such defaulting Vendor/Supplier/Contractor/ Consultant for putting on Holiday for a period from one to three years as given below:

- (i) Poor Performance due to reasons other than Quality: One Year
- (ii) Poor Performance on account of Quality (if any mark obtained against Quality parameter is less than 30): **Two Years**
- (iii) Poor Performance leading to termination of contract or Offloading of contract due to poor performance solely attributable to Vendor/Supplier/Contractor/Consultant or Repeated Offence:

 Three Years



Non-performance of a Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order such Vendor/ Supplier/Contractor/Consultant are also to be considered for Suspension.

(B) Where Performance rating is "FAIR"

Issuance of warning to such defaulting Vendors/ Contractors/ Consultants to improve their performance.

6.0 REVIEW & RESTORATION OF PARITES PUT ON HOLIDAY

6.1 An order for Holiday passed for a certain specified period shall deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation.

Further, in case Vendor/ Supplier/Contractor/ Consultant is put on holiday due to quality, and new order is placed on bidder after restoration of Vendor/ Supplier/Contractor/ Consultant, such order will be properly monitored during execution stage by the concerned site.

7.0 EFFECT OF HOLIDAY

- **7.1** If a Vendor/ Supplier/Contractor/ Consultant is put on Holiday, such Vendor/ Supplier/Contractor/ Consultant shall not be considered in ongoing tenders / future tenders.
- 7.2 However, if such Vendor/ Supplier/Contractor/ Consultant is already executing any other order/ contract and their performance is satisfactory in terms of the relevant contract, should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract. In such a case CPBG will not be forfeited and payment will be made as per provisions of concerned contract. However, this would be without prejudice to other terms and conditions of the contract.
- 7.3. Effect on other ongoing tendering:
- 7.3.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the party shall be ignored.
- 7.3.2 After opening Technical bid but before opening the Price bid, the Price bid of the party shall not be opened and BG/EMD submitted by the party shall be returned to the party.
- 7.3.3 After opening of price, BG/EMD made by the party shall be returned; the offer of the party shall be ignored & will not be further evaluated. If errant party emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.



8.0 While putting the Vendor/ Supplier/Contractor/ Consultant on holiday as per the procedure, the holding company, subsidiary, joint venture, sister concerns, group division of the errant Vendor/ Supplier/Contractor/ Consultant shall not be considered for putting on holiday list.

Any bidder, put on holiday, will not be allowed to bid through consortium route also in new tender during the period of holiday.

9.0 If an unsuccessful bidder makes any vexatious, frivolous or malicious complaint against the tender process with the intention of delaying or defeating any procurement or causing loss to GGPL or any other bidder, such bidder will be put on holiday for a period of six months, if such complaint is proved to be vexatious, frivolous or malicious, after following the due procedure.

10. APPEAL AGAINST THE DECISION OF THE COMPETENT AUTHORITY:

- (a) The party may file an appeal against the order of the Competent Authority for putting the party on Holiday list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the receipt of Holiday order.
- (b) Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- (c) Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- (d) "Appellate Authority" shall mean Committee of Directors consisting of Director (Finance) and Director (BD) for works centers under Director (Projects). For all other cases committee of Directors shall consist of Director (Finance) & Director (Projects).

11. ERRANT BIDDER

In case after price bid opening the lowest evaluated bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, GGPL shall forfeit EMD paid by the bidder and such bidders shall be debarred from participation in re-tendering of the same job(s)/item(s).

Further, such bidder will be put on holiday for a period of six months after following the due procedure.

12. In case Govt. department brings to the notice of GGPL that a Party has not paid to the credit of the Government the GST service collected from GGPL, then party will be put on holiday for a period of six months after following the due procedure.



GGPL PERFORMANCE RATING DATA SHEET (FOR PROJECTS/ CONSULTANCY JOBS)

i) Project/Work Centre :

ii) Order/ Contract No. & date :

iii) Brief description of Items

Works/Assignment

iv) Order/Contract value (Rs.) :

v) Name of Vendor/Supplier/ :

Contractor/ Consultant

vi) Contracted delivery/:

Completion Schedule

vii) Actual delivery/

Completion date

Performance Parameter	Delivery/ Completion Performance	Quality Performance	Reliability Performance#	Total
Maximum Marks	40	40	20	100
Marks Allocated				

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Remarks (if any)

PERFORMANCE RATING (**)

Note:

- (#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub- vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance.
- (*) Allocation of marks should be as per enclosed instructions (**) Performance rating shall be classified as under :

Sl.	Range (Marks)	Rating
No.		
1	60 & below	POOR
2	61-75	FAIR
3	76-90	GOOD

Signature of Authorised Signatory:

Name:



4	More than 90	VERY	Designation:
		GOOD	_



Instructions for allocation of marks

1. Marks are to be allocated as under:

1.1	DELIVERY/ COMPLET	TION PERFORMANCE	40 Marks
	Delivery Period/ Completion Schedule	Delay in Weeks	Marks
	a) Upto 3 months	Before CDD	40
		Delay upto 4 weeks	35
		" 8 weeks	30
		" 10 weeks	25
		" 12 weeks	20
		" 16 weeks	15
		More than 16 weeks	0
	b) Above 3 months	Before CDD	40
		Delay upto 4 weeks	35
		" 8 weeks	30
		" 10 weeks	25
		" 16 weeks	20
		" 20 weeks	15
		" 24 weeks	10
		More than 24 weeks	0
1.2	QUALITY PERFORMA	NCE	40 Marks
	For Normal Cases: No De	fects/ No Deviation/ No failure:	40 marks
	i) Rejection/Defects	Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases	10 marks
	ii) When quality	Failure of severe nature	0 marks
	failure endanger	- Moderate nature	5 marks
	system integration - low and safety of the		10-25 marks
	system		
	iii) Number of	1. No deviation	5 marks
	deviations	2. No. of deviations ≤ 2	2 marks
		3. No. of deviations > 2	0 marks



1.3 RELIABILITY PERFORMANCE

20 Marks

Α.	FOR WORKS/CONTRACTS	
i)	Submission of order acceptance, agreement, PBG, Drawings and other documents within time	4 marks
ii)	Mobilization of resources as per Contract and in Time	4 marks
iii)	Liquidation of Check-list points	4 marks
iv)	Compliance to statutory and HS&E requirements or	4 marks
	Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	
v)	Timely submission of estimates and other documents for Extra, Substituted & AHR items	4 marks
В.	FOR SUPPLIES	
i)	Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
ii)	Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	5 marks
iii)	Response to various correspondence and conformance to standards like ISO	5 marks
iv)	Submission of all required documents including Test Certificates at the time of supply	5 marks



Annexure-2

GGPL PERFORMANCE RATING DATA SHEET (FOR O&M)

:١	Location Location	
1	Location	•

ii) Order/ Contract No. & date :

iii) Brief description of Items : Works/Assignment

iv) Order/Contract value (Rs.) :

v) Name of Vendor/Supplier/ : Contractor/ Consultant

vi) Contracted delivery/ :

Completion Schedule

vii) Actual delivery/ :

Completion date

Performance	Delivery	Quality	Reliability	Total
Parameter	Performance	Performance	Performance#	
Maximum Marks	40	40	20	100
Marks Allocated (*)				

Remarks (if any)

PERFORMANCE RATING (**)	
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Note:

- (#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub- vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance
- (*) Allocation of marks should be as per enclosed instructions (**) Performance rating shall be classified as under:

Sl. No.	Range (Marks)	Rating
1	60 & below	POOR

Signature of Authorised Signatory:



2	61-75	FAIR	Name:
3	76-90	GOOD	
4	More than 90	VERY	Designation:
		GOOD	



Instructions for allocation of marks (For O&M)

1. Marks are to be allocated as under:

Delivery Period/Completion Schedule Delay in Weeks Marks a) Upto 3 months Before CDD 40 Delay upto 4 weeks 35 30 " 10 weeks 25 20 " 12 weeks 20 15 More than 16 weeks 0 0 b) Above 3 months Before CDD 40 Delay upto 4 weeks 35 35 " 8 weeks 30 35 " 10 weeks 25 36 " 10 weeks 25 36 " 10 weeks 25 36 " 20 weeks 15 30 " 24 weeks 10 10 More than 24 weeks 0 0 10 Weeks 25 20 " 24 weeks 10 10 " 24 weeks 10 10 More than 24 weeks 0 0 10 Rejection/Defects Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases 10 marks ii) When quality Failure of severe nature 5 marks system integration - low severe nature <th>1.1</th> <th colspan="2">DELIVERY/ COMPLETION PERFORMANCE</th> <th colspan="2">40 Marks</th>	1.1	DELIVERY/ COMPLETION PERFORMANCE		40 Marks	
Delay upto 4 weeks " 8 weeks " 10 weeks " 12 weeks " 16 weeks " 10 weeks " 20 weeks " 10 weeks " 20 weeks " 24 weeks " 26 weeks " 27 weeks " 28 weeks " 10 weeks " 29 weeks " 10 weeks " 20 weeks " 20 weeks " 20 weeks " 24 weeks " 25 weeks " 26 weeks " 27 weeks " 28 weeks " 10 weeks " 29 weeks " 20 weeks " 20 weeks " 20 weeks " 20 weeks " 30 weeks " 24 weeks " 10 warks " 10 warks		-	Delay in Weeks	Marks	
## Sweeks 30 30 30 30 30 30 30 3		a) Upto 3 months	Before CDD	40	
" 10 weeks 25 " 12 weeks 20 " 16 weeks 15 More than 16 weeks 0 b) Above 3 months Before CDD 40 Delay upto 4 weeks 35 " 8 weeks 30 " 10 weeks 25 " 16 weeks 20 " 20 weeks 15 " 24 weeks 10 More than 24 weeks 0 1.2 QUALITY PERFORMANCE 40 Marks For Normal Cases: No Defects/ No Deviation/ No failure: 40 marks i) Rejection/Defects Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases ii) When quality Failure of severe nature 5 marks system integration - low severe nature 5 marks and safety of the system iii) Number of 1. No deviation 5 marks deviations 2. No. of deviations ≤ 2 marks			Delay upto 4 weeks	35	
" 12 weeks 20 " 16 weeks 15 More than 16 weeks 0 b) Above 3 months Before CDD 40 Delay upto 4 weeks 35 " 8 weeks 30 " 10 weeks 25 " 16 weeks 20 " 20 weeks 15 " 24 weeks 10 More than 24 weeks 0 1.2 QUALITY PERFORMANCE For Normal Cases: No Defects/ No Deviation/ No failure: 40 marks i) Rejection/Defects Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases ii) When quality Failure of severe nature failure endanger - Moderate nature system integration and safety of the system iii) Number of deviations 1. No deviation 5 marks deviations 5 marks 2. No. of deviations ≤ 2 20 marks 35 marks 40 Marks 40 marks 5 marks 5 marks 5 marks 5 marks 6 marks 7 marks 8 marks 10 marks 1			" 8 weeks	30	
b) Above 3 months Before CDD Delay upto 4 weeks 35 " 8 weeks 30 " 10 weeks 25 " 16 weeks 20 " 20 weeks 15 " 24 weeks 10 More than 24 weeks 0 1.2 QUALITY PERFORMANCE For Normal Cases: No Defects/ No Deviation/ No failure: i) Rejection/Defects Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases ii) When quality failure endanger failure endanger system integration and safety of the system iii) Number of deviations 1. No deviation 2. No. of deviations ≤ 2 40 40 40 40 40 40 40 40 40			" 10 weeks	25	
b) Above 3 months Before CDD Delay upto 4 weeks 35 " 8 weeks 30 " 10 weeks 25 " 16 weeks 20 " 20 weeks 15 " 24 weeks 10 More than 24 weeks 0 1.2 QUALITY PERFORMANCE For Normal Cases: No Defects/ No Deviation/ No failure: i) Rejection/Defects Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases ii) When quality failure endanger failure endanger system integration and safety of the system iii) Number of deviations 1. No deviation 5 marks 1. No deviation 5 marks 1. No deviation 5 marks 2 marks 2 marks 40 marks 10 marks 5 marks 5 marks 5 marks 5 marks 10 marks 5 marks 5 marks 10 marks 5 marks 10 marks 5 marks 10 marks 5 marks 10 marks 2 marks			" 12 weeks	20	
b) Above 3 months Before CDD Delay upto 4 weeks 35 "8 weeks 30 "10 weeks 25 "16 weeks 20 "20 weeks 15 "24 weeks 10 More than 24 weeks i) Rejection/Defects Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases ii) When quality failure endanger system integration and safety of the system iii) Number of deviations Perform CDD 40 Auch S 40 Marks 40 marks 10 marks 10 marks 10 marks 10 marks 10 marks 5 marks 5 marks 10 marks 10 marks			" 16 weeks	15	
Delay upto 4 weeks " 8 weeks " 10 weeks " 10 weeks " 20 weeks " 20 weeks " 24 weeks " 24 weeks 10 More than 24 weeks 10 More than 24 weeks 10 Marks For Normal Cases: No Defects/ No Deviation/ No failure: 1) Rejection/Defects Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases ii) When quality Failure of severe nature quantity for normal cases iii) When quality Failure of severe nature system integration - low severe nature 10-25 marks and safety of the system iii) Number of deviations 1. No deviation 5 marks 5 marks 2. No. of deviations ≤ 2 marks			More than 16 weeks	0	
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" 24 weeks 10 More than 24 weeks 0 1.2 QUALITY PERFORMANCE For Normal Cases : No Defects/ No Deviation/ No failure: 40 marks i) Rejection/Defects Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases ii) When quality Failure of severe nature 0 marks failure endanger - Moderate nature 5 marks system integration - low severe nature 10-25 marks and safety of the system iii) Number of 1. No deviation 5 marks deviations 2. No. of deviations ≤ 2 marks			" 16 weeks	20	
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1.3 RELIABILITY PERFORMANCE

20 Marks

Α.	FOR WORKS/CONTRACTS	
i)	Submission of order acceptance, agreement, PBG, Drawings and other documents within time	4 marks
ii)	Mobilization of resources as per Contract and in Time	4 marks
iii)	Liquidation of Check-list points	4 marks
iv)	Compliance to statutory and HS&E requirements or	4 marks
	Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	
v)	Timely submission of estimates and other documents for Extra, Substituted & AHR items	4 marks
В.	FOR SUPPLIES	
i)	Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
ii)	Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	5 marks
iii)	Response to various correspondence and conformance to standards like ISO	5 marks
iv)	Submission of all required documents including Test Certificates at the time of supply	5 marks



Dated

PROFORMA FOR CONTRACT AGREEMENT

101/2011(0.0012)	Butea
Contract Agreement for the work of	_of Godavari Gas Private
Limited (GGPL) made on between (Name and Address)_	hereinafter called the
"CONTRACTOR" (which term shall unless excluded	by or repugnant to the
subject or context include its successors and permitted a	assignees) of the one part
and GGPL having its registered office at 85-6-23/2, R'	TC Complex Road, Near
Morampudi Junction, Rajahmundry, Andhra Pradesh	n, hereinafter called the
"EMPLOYER" (which term shall, unless excluded b	y or repugnant to the
subject or context include its successors and assignee	s) of the other part.

WHEREAS

FOA/LOA No. GGPL/

- A. The EMPLOYER being desirous of having provided and executed certain work mentioned, enumerated or referred to in the Tender Documents including Letter Inviting Tender, General Tender Notice, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, Plans, Time Schedule of completion of jobs, Schedule of Rates, Agreed Variations, other documents has called for Tender.
- The CONTRACTOR has inspected the SITE and surroundings of WORK B. specified in the Tender Documents and has satisfied himself by examination before submitting his tender as to the nature of the surface, strata, soil, sub-soil and ground, the form and nature of site and local conditions, the quantities, nature and magnitude of the work, the availability of labour and materials necessary for the execution of work, the means of access to SITE, the supply of power and water thereto and the accommodation he may require and has made local and independent enquiries and obtained complete information as to the matters and thing referred to, or implied in the tender documents or having any connection therewith and has considered the nature and extent of all probable and possible situations, delays, hindrances or interferences to or with the execution and completion of the work to be carried out under the CONTRACT, and has examined and considered all other matters, conditions and things and probable and possible contingencies, and generally all matters incidental thereto and ancillary thereof affecting the execution completion of the WORK and which might have influenced him in making his tender.



C. The Tender Documents including the Notice Letter Inviting Tender, General Conditions of Contract, Special Conditions of Contract, Schedule of Rates, General Obligations, SPECIFICATIONS, DRAWINGS, PLANS, Time Schedule for completion of Jobs, Letter of Acceptance of Tender and any statement of agreed variations with its enclosures copies of which are hereto annexed form part of this CONTRACT though separately set out herein and are included in the expression "CONTRACT" wherever herein used.

AND WHEREAS

The EMPLOYER accepted the Tender of the CONTRACTOR for the provision and the execution of the said WORK at the rates stated in the schedule of quantities of the work and finally approved by EMPLOYER (hereinafter called the "Schedule of Rates") upon the terms and subject to the conditions of CONTRACT.

NOW THIS AGREEMENT WITNESSETH AND IT IS HEREBY AGREED AND DECLARED AS FOLLOWS:-

- In consideration of the payment to be made to the CONTRACTOR for the WORK to be executed by him, the CONTRACTOR hereby covenants with EMPLOYER that the CONTRACTOR shall and will duly provide, execute and complete the said work and shall do and perform all other acts and things in the CONTRACT mentioned or described or which are to be implied there from or may be reasonably necessary for the completion of the said WORK and at the said times and in the manner and subject to the terms and conditions or stipulations mentioned in the contract.
- 2. In consideration of the due provision execution and completion of the said WORK, EMPLOYER does hereby agree with the CONTRACTOR that the EMPLOYER will pay to the CONTRACTOR the respective amounts for the WORK actually done by him and approved by the EMPLOYER at the Schedule of Rates and such other sum payable to the CONTRACTOR under provision of CONTRACT, such payment to be made at such time in such manner as provided for in the CONTRACT.

AND

3. In consideration of the due provision, execution and completion of the said



WORK the CONTRACTOR does hereby agree to pay such sums as may be due to the EMPLOYER for the services rendered by the EMPLOYER to the CONTRACTOR, such as power supply, water supply and others as set for in the said CONTRACT and such other sums as may become payable to the EMPLOYER towards the controlled items of consumable materials or towards loss, damage to the EMPLOYER'S equipment, materials construction plant and machinery, such payments to be made at such time and in such manner as is provided in the CONTRACT.

It is specifically and distinctly understood and agreed between the EMPLOYER and the CONTRACTOR that the CONTRACTOR shall have no right, title or interest in the SITE made available by the EMPLOYER for execution of the works or in the building, structures or work executed on the said SITE by the CONTRACTOR or in the goods, articles, materials etc., brought on the said SITE (unless the same specifically belongs to the CONTRACTOR) and the CONTRACTOR shall not have or deemed to have any lien whatsoever charge for unpaid bills will not be entitled to assume or retain possession or control of the SITE or structures and the EMPLOYER shall have an absolute and unfettered right to take full possession of SITE and to remove the CONTRACTOR, their servants, agents and materials belonging to the CONTRACTOR and lying on the SITE.

The CONTRACTOR shall be allowed to enter upon the SITE for execution of the WORK only as a licensee simpliciter and shall not have any claim, right, title or interest in the SITE or the structures erected thereon and the EMPLOYER shall be entitled to terminate such license at any time without assigning any reason.

The materials including sand, gravel, stone, loose, earth, rock etc., dug up or excavated from the said SITE shall, unless otherwise expressly agreed under this CONTRACT, exclusively belong to the EMPLOYER and the CONTRACTOR shall have no right to claim over the same and such excavation and materials should be disposed of on account of the EMPLOYER according to the instruction in writing issued from time to time by the ENGINEER-IN-CHARGE.

In Witness whereof the parties have executed these presents in the day and the year first above written.

Signed and Delivered for and on

Signed and Delivered for and on



Tender No.: GGPL/C&P/SR 1000013/2022-23/07 behalf of EMPLOYER

benair of EMPLOYER.	on benaif of the CONTRACTOR
GGPL	(NAME OF THE CONTRACTOR
Date : Place:	Date : Place:
IN PRESENCE OF TWO WITNESSES	
1.	1.
2.	2.



SECTION VI

SCOPE OF WORK & SPECIAL CONDITION OF CONTRACT (SCC)





ELECTRICAL WORKS



GENERAL ISTRUCTIONS

1.01 Introduction

The intent of this specification is to define the requirements for the supply of equipment and materials (as required), erection, testing and commissioning of the electrics and illumination power distribution system.

The work shall be carried out in the best workmanship - like manner, in conformity with these specifications, approved drawings and the instructions of the Engineer-in-charge from time to time.

The contract shall include clearing of temporary construction, waste materials and loose earth, which might get collected in and nearby the work site consequent of the execution of work under this contract.

1.02 Standards

The equipment to be supplied as well as the work being executed shall conform to applicable Indian Standards (BIS)/ recognized International Standards viz IEC/IEEE/VDE where corresponding Indian Standards do not exist, code of practices of the Bureau of India Standards, technical specifications and installation standards enclosed herewith in case of any conflict, the most stringent specification shall govern.

In addition, the work shall also conform to the requirements of the following: The Indian Electricity Act, and the Rules framed there under The fire Insurance Regulations

The regulations laid down by the Chief Electrical Inspector of the state government / Central Electricity Authority (CEA).

The regulations laid down by the Factory Inspector.

The regulations laid down by the Chief Inspector of Explosives.

Any other regulations laid down by the Central, State or Local Authorities from time to time during the pendency of this contract.

1.03 Power Supply Parameters

NORMAL POWER	230 V AC, 1 Phase
LIGHTING DISTRIBUTION	230 V AC, 1 Phase
(Normal)	
UPS	230 V AC, 1 Phase

1.04 SCOPE OF WORK

Scope of work shall cover procurement, supply, loading, transportation, delivery, transit insurance, unloading, storage and handling at site, erection, insurance during erection till handing over, testing and commissioning of various equipment/systems/sub-systems of FRLS,1.1kV Grade Copper LT Power



cables, FLP Outdoor Illumination consisting of Street light poles, light fixtures, switches/sockets, FLP type Isolating switch , Earthing & lightning protection system including civil and structural works, conducting site Tests and trial runs of the above System, Watch and ward of the site till handing over to Owner, preliminary acceptance test (PAT), final acceptance test (FAT) and handing over the system in 'Ready to switch on' condition to the Owner, as described in the specification .The package shall be executed on **ITEM RATE BASIS** as per enclosed BOQ.

All equipment's / materials supplied by the contractor shall be as per the list of approved makes enclosed with this document subject to submission of Certification and approvals.

Special Instructions to the Tender:

- 1. The scope of work shall include minor civil works related to the placement of panels/equipment being supplied by tenderer in electrical premises viz, chipping, grouting, making/closing, providing chequered plates for unused openings etc.
- 2. Tenderer shall coordinate and co-operate with Owner/ Owner's Consultant, other agencies engaged by the Owner for any data/information exchange, installation / erection, testing and commissioning of plant. The scope includes attending various co-ordination meetings/ progress review meetings, design review meetings etc.
- 3. The successful tenderer shall carefully go through the clause of Invitation to Tender, specification, Bill of Quantities and drawings and shall include in his rates any sum he may consider necessary to cover fulfillment of the various clauses contained therein. Unit prices stated in the Bill of Quantities against the item of work shall be inclusive of all installation accessories and consumables necessary to complete the said work within the contemplation of the contract. Beyond the unit prices no extra amount will be paid for incidental contingent work or materials.
- 4. For installation work at site, the successful tenderer shall be fully responsible for arranging the required handling equipment, winches, pulley, drilling machines, tools and tackles, welding sets, pipe bending machine, cable crimping tools, gauges, scaffoldings, ladders, temporary water and power connections, testing instruments etc. as required for smooth execution of work.
- 5. On completion of the installation but before energization of the system, all installations shall be physically checked and properly tested. These checks and tests shall be conducted by the tenderer under the supervision of Owner/Consultant. The tenderer shall furnish the final status and test results. Any defect observed during such check and tests shall be rectified by the tenderer free of cost within contract completion period.
- 6. The wastage limits for cables shall not be more than 2.5 % of total quantity



of cables. Before cutting of cables from drums, the tenderer shall carry out measurement of cable required to be laid and the cable shall be cut from the drum as per drum cutting schedule to be prepared by him so that wastage is minimized.

- 7. The quantities given in Schedule of Quantities are probable quantities of work involved. These are furnished for the tenderer's conveniences and it must be clearly understood that the contract is not a lump sum contract, that the probable quantities and the aggregate value of the entire tender are only indicative and the OWNER does not in any way assure the tenderer or guarantee that the actual quantity of work would correspond to the probable quantities in the tender.
- 8. Cables shall be supplied in wooden cable drums and the minimum cable length in a drum shall generally not be less than 1000M. Tenderer shall note that variation of cable length in each cable drum shall not be more than + / 5 % of total cable length for the cable drum. However, there shall not be any "negative" (-ve) tolerance in the quantity of cables for each size of cable.
- 9. Tender shall note that the cable jointing shall be avoided as far as possible, however if the requirement of cable joints is inevitable the same shall be done only after the approval from Owner / consultant at site.
- 10. The installation price for equipment and fittings shall include supply, fabrication and erection of painted supporting brackets made of steel angles, flats etc. including bolts, nuts, washers etc., minor civil work and all consumable materials required for the installation. Suitable identification tags shall be provided without any extra cost to the OWNER.
- 11. Generally, all floor mounted panels shall be tack welded to embedded channels and inserts provided in the floor. Where foundation pockets are not provided, and are required for fixing of equipment the tenderer shall provide adequate size of expansion type fasteners which shall be installed in the floor slab or brick wall by drilling as recommended. No additional rates shall be admissible on this account, whatsoever.
- 12. The tenderer shall include in his quoted installation price the supply of all necessary miscellaneous erection materials such as cable clamps, bolts, nuts, washers, shims, tapes etc as required to complete the installation of individual equipment and cables in all respect.
- 13. Installation price of cables/wires shall include supply and installation of all accessories like glands, lock nuts, cable lugs and ferrules, bolts, nuts, screws, washers, identification tags etc. and all other consumable materials as required. Also cost for transporting of cable drums, laying of cable, cutting of cables as per required length, returning surplus/cut length, sealing of pipes and holes including spare ones are included. Installation price of cables shall include laying of cables through pipes and pipe sleeves wherever required.



Installation price for laying of cables in air shall include required consumables, clamps, providing aluminum cable tags at both ends at specified lengths including supply and punching of tags.

- 14. Installation price of pipes to be laid in ground required for cable laying, road / rail crossings shall include necessary cutting of road, excavation of required depth as per the drawings, back filling, Laying, concrete embedment and subsequent repair and finishing the road as before.
- 15. Installation price of cables/wires shall include all the labour along with the rate for the services of jointer and labour, supervision, testing and cost of installation material such as identification tags, consumable material etc. as required for completing the termination work in all respects. The rate for pulling of cables through conduits / pipes, laying inside covered cable trenches, laying on walls on saddles / Clamps, measurement at site prior to cutting of cable, cable ties, cable clamps, dressing of cables, providing cable tags at intervals and at exit / entry points of buildings, sealing of the conduit/pipes with cable putty, Cable markers shall be provided at every 10 meters for cable directly buried in ground. shall be included in the rates quoted for installation of cables. Installation price for cable trays shall also include the rates for coupler plates, Zinc passivated fasteners, clamps for fixing on cable tray supports etc. in the rate quoted for the supply and installation of cable trays.
- 16. Installation price of directly buried underground cables shall include excavation of cable trench to a depth of 1000mm from finished ground level, providing at least 75mm sand cushion in the trench, laying of cable over the sand cushion, again providing 75mm sand cushion on the cable laid, placing burnt red bricks suitably over top layer of sand cushion and back filling of excavated trench with good soil. The installation charges of underground cabling shall include labour, supply & installation of above said materials viz., sand, burnt red bricks, good earth for back filling, cable route markers, joint markers etc.
- 17. The installation price of equipment like LDB, MCBDBs, MCB box, earthing, cables, wiring, lighting etc. covered in the scope shall include floor openings/drilling/cuttings, provision of sleeves / inserts/ mounting channels wherever required, foundation bolts along with all civil materials for completion of installation in all respects for smooth and reliable operation. The installation rates shall also include supply and fabrication of steel materials including all miscellaneous accessories. Tenderer shall include the rates for minor civil works such as chipping/grouting, providing shim plates, tack welding to floor / wall embedded inserts, providing bolts/nuts for fastening to embedded bolts, welding of supports to column etc., in cost for the installation of switchboards along with the cost for embedment in concrete / supply of fabricated supports.



- 18. Installation prices of fan/exhaust fans, PVC conduits etc. shall include supply and erection of supporting brackets, clamps, saddles, brackets, hooks, cleats including bolts, nuts, washers identification tags etc. and other consumables as well as minor civil work involved for the installation.
- 19. Installation price of light fittings viz., FLP light fixtures, well glass/Road light fittings / low bay fluorescent LED light fittings shall include mounting of lighting fittings on structure/wall including mounting of control gear box by means of conduits of required length, MS angle / pipe, brackets, suspension hooks, straps, clamps, ball and socket, nuts, bolts and terminal boxes wherever required, cutting and making of required threads and supply steel materials, fabrication of brackets, interconnection between control gear box, bushing, locknuts etc. as required. Flexible cables as required for tapping to individual lighting fittings as well as 14 SWG GS wire for earthing and flexible conduits shall be included in the prices quoted for installation of lighting fittings. Supply of all materials and accessories shall be included in the installation price, Installation rates for road lighting fittings shall also include supply of steel materials, fabrication of brackets, interconnection between Control Gear box and fittings with supply of suitable clamps, lugs etc. Flexible conduits wherever required same shall be included in the installation rate of light fittings.
- 20. Installation price of point wiring includes cabling /wiring, installation of switchboards, modular type switches & universal socket outlet, junction boxes, ceiling roses along with 19mm dia Rigid PVC conduits. The point wiring shall also include circular/rectangular thermoplastic material junction boxes, bends, tees, sockets, adopters, reducers etc. and accessories such as saddles, distance pieces etc. as per requirement for installation on walls / structure / ceiling.
- 21. Installation prices of earthing conductors along floor, wall, structures, etc. shall include clamps, cleats and other fixing devices, jointing as well as termination including chipping of floors where required and making good the same after erection. The installation price of earthing strips laid buried in ground shall include excavation upto 800mm depth, laying, backfilling including clamps, cleats and other fixing devices, jointing as well as termination, bitumen paint at the joints of the earth strip. Also the installation price of earth station shall include excavation, dewatering, laying of pipes, providing supports, drilling, welding, hot boring, jointing with jointing materials, , fabrication, fixing of all fittings and accessories, wrapping and coating, construction of concrete enclosure with top cover and filling with salt and good earth complete with testing, painting the tested value together with station No. on aluminum marker plates and commissioning to ensure satisfactory earth resistance results.
- 22. The rates for fixing of supports by means of tack welding, grouting, anchor bolts etc. as required as per site conditions shall be included in the rates quoted for installation of prefabricated galvanized cable tray support



structures.

- 23. Submission of manufacturer's test reports of all equipment is in the scope of work of the tenderer.
- 24. Submission of documentation on safety and statutory measures.
- 25. Any rework required to be done due to inadequacies in the work of tenderer and any reasons not attributable to Owner shall be done by the tenderer at no extra cost.
- 26. During site installation, testing and commissioning if any damages are caused by incorrect procedures of the successful tenderer such items to be repaired / replaced by tenderer free of cost within the time schedule for completion of work at no extra cost.

1.05 DRAWINGS, STANDARD SPECIFICATIONS AND INSTALLATION STANDARDS

- 1) The drawings accompanying the tender documents when read with specification shall depict the electrical system of the Terminal. These are indicative of the nature of work and issued for tendering purposes only. Purpose of these drawings is to enable the tenderer to make an offer in line with the requirements of the Owner. Construction shall be as per drawings / specifications issued / approved by the Engineer-in-charge during the course of execution of work.
- 2) Conduit layout drawing in ceiling, wherever required, to be prepared by the contractor and shall be submitted for approval.
- 3) After the job completion, contractor shall submit catalogues/manuals (O&M) of major brought out items. Final certified as built drawings, documents and manuals etc. shall be submitted by the contractor to Owner in bound volume with one set in soft copy (CD) plus five sets of prints.





TECHNICAL SPECIFICATION FOR UPS



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- 2.0 CODES AND STANDARDS
- 3.0 SITE CONDITIONS
- 4.0 DESIGN AND FABRICATION REQUIREMENTS
- 5.0 CONSTRUCTIONAL DETAILS
- **6.0 EQUIPMENT SPECIFICATION**
- 7.0 PAINTING
- 8.0 INSPECTION, TESTING AND ACCEPTANCE
- 9.0 SPARES
- 10.0 PACKING AND DISPATCH
- 11.0 DEVIATIONS



1. SCOPE

- 1.1. The specification covers the design, manufacture, testing at works and dispatch in well packed condition of Uninterrupted Power Supply System required to supply AC power for nonlinear loads.
 - 1.2. The scope shall include the following:
 - i) Online UPS system including converter, inverter, static& maintenance switches
 - ii) in-built bypass unit
 - iii) Sealed lead acid battery (1x 100% for 4 hours back up)
 - iv) Interconnecting cabling between various units of UPS and batteries
 - v) All other items required, but not specified for safe and reliable operation of UPS system.

2. CODES & STANDARDS

- 2.1. The equipment shall conform to the latest issue of the following and relevant Indian Standard specifications or equivalent specification of the country of origin or IEC specifications.
 - 2.2 The equipment offered shall generally conform to the following codes / standards:

IS: 13314 – Solid state inverters run from storage batteries.

IS: 11260 -- Stabilized power supplies AG output.

IEC: 146 -- Solid state inverters.

2.3 The equipment shall also conform to the provision of Indian Electricity Rules, Indian Supply Act and any other statutory regulations in force from time to time.

3. AMBIENT CONDITIONS

Ambient Air Temperature:

Maximum - $48 \, {}^{0}\text{C}$

Minimum - $18 \, {}^{0}\text{C}$



4. DESIGN AND OPERATIONAL REQUIREMENTS

SYSTEM OPERATION

- 4.1. The UPS unit and its associated equipment shall be suitable for operating at the specified rating continuously with the specified voltage and frequency variations under the ambient conditions without exceeding the temperature rise limits specified in relevant standards and without any detrimental effect on any part.
- 4.2. The UPS system shall be based on latest generation of IGBT based, pulse width modulated (PWM) design with proven performance. The system should be able to communicate with RTU's on Modbus protocol and provided with multi-dropping facility.

4.3. Single UPS with by-pass

In UPS system having this configuration a single rectifier and inverter shall be provided. Under normal conditions when AC mains power is available, the rectifier shall simultaneously feed DC power to inverter as well as for float/rapid charging of the battery. The AC supply to loads shall be fed from inverter output. In case of any fault of the inverter, the load shall be automatically transferred to stabilized bypass supply and retransfer of load from stabilized bypass supply of the inverter shall be possible in auto as well as in manual mode.

- 4.4. In case of AC input power failure or battery charger failure, the battery shall supply power to inverter without any interruption. The charger shall be designed for simultaneously feeding complete inverter load and for float/rapid charging the battery to its rated capacity. Charger shall be equipped with 'On Line' automatic as well as manual charging facility.
- 4.5. The UPS unit shall be suitable for 0.7 lagging to unity power factor loads. The overall load power factor may be taken as 0.8 lagging.
- 4.6. The maximum waveform distortion of the output voltage shall not exceed 5% r.m.s for linear load and 10% r.m.s. for non-linear loads. The UPS unit shall be suitable for operation for non-linear loads having crest factor of 3.
 - 4.7. The inverter steady state output voltage and frequency (free running) variation shall not exceed $\pm 1\%$ for specified input power supply condition and no-load to full load condition.
 - 4.8. Voltage dip/rise on sudden application / throw of 100% load or on changeover from inverter to bypass or vice versa shall not exceed 15% and shall be recovered within 100 m.sec. to rated voltage.



- 4.9. UPS shall be designed for overload of 125% for 10 min. and 150% for 10 sec. After which drooping characteristic shall come into operation.
- 4.10. On failure of the main supply, inverter unit shall continue to supply rated load from the battery bank for 4 hours' duration.
- 4.11. Charger shall simultaneously supply entire power necessary for inverter and to keep the battery of required capacity in fully charged condition. Provision for automatic charging in both float and boost shall be made.
- 4.12. Battery shall be sealed lead acid battery. The battery capacity shall be decided considering load power factor as 0.8, derating factor for ageing 0.8 and derating for minimum ambient temperature as applicable.
- 4.13. The ventilation fans, if provided shall be supplemented by 100% redundant fan in normal operation. Normal and redundant fan shall run together. The power supply for fan shall be tapped from the inverter output. It should be possible to operate inverter even after the failure of the fan without temperature rise inside the inverter cubicle exceeding the safe operating temperature limits for 2 hours. With alarm for fan failure
- 4.14. In case of inverter failure due to any reason or overload, affected unit should be isolated and changeover to other inverter or to bypass should take place automatically.
 - 4.15. Noise level at a distance of 1m from UPS panels shall not exceed 60 dB.
 - 4.16.UPS system shall be provided with necessary control, protection, metering, indication, alarm & annunciation for reliable and safe operation of the system.
 - 4.17. All semi-conducting devices shall be protected by fast acting semi-conducting fuses.
 - 4.18. The battery may be taken out of service for maintenance during which period it shall be possible for the inverter to continue operation taking power from the rectifier. The input filter of the inverter shall be suitably designed to take care of this operational requirement.
 - 4.19.It shall be possible to vary the output voltage steplessly within \pm 5% of the specified output voltage. This adjustment shall be possible to be made when UPS is in operation.
 - 4.20.UPS system shall be suitable for both floating output or earthing of one leg in case of single phase system / star-point in case of three phase system.
 - 4.21. The UPS system shall have very high system of reliability having minimum MTBF of 50,000 hrs. Vendor shall furnish the value of MTBF, MTTR and availability factor.



5. CONSTRUCTIONAL DETAILS

- 5.1. The equipment shall preferably be supplied in enclosed, dust & vermin proof, floor mounted, sheet steel enclosure. In case, it is necessary to provide opening for ventilation, this should be closed by fine mesh. Minimum degree of protection for enclosure shall be IP-41 as per IS-13997.
- 5.2. All the live parts which are accessible after opening the front cover / back cover shall be properly insulated or provided with insulating barrier to prevent accidental contact. Bus bars of distribution boards shall be PVCsleeved.
 - 5.3. Smaller size UPS can be directly placed on floor or fixed on the mounting stand support.
- 5.4. Battery banks shall be mounted on racks in proper manner. Vendor shall supply rack arrangement, connecting cables and all accessories required for proper mounting and operation of battery banks.

6. EQUIPMENT SPECIFICATION

6.1. All components shall conform to relevant IS/IEC standards and shall be of reputed make. Makes of all components shall be subject to purchaser's / consultant's approval.

6.2. THYRISTORS, DIODES AND TRANSISTORS.

The thyristors, diodes and transistors shall have adequate safety margins to withstand specified operating conditions. A factor of safety of minimum 4 shall be taken against voltage surges.

6.3. PCBs

All electronic control & monitoring printed circuit boards shall be fixed type on ceramic insulators to avoid loose contacts due to vibration/long usage. Failure of each PCB shall be indicated by visual alarm and indication. The visual fault diagnostic shall preferably indicate fault into various sections of the cards. All printed circuit board shall be mounted on fixed ceramic insulator.

6.4. ELECTROLYTIC CAPACITORS

These may be polarized aluminium type I, suitable for long life and category I, as per IS: 4317 or equivalent IEC. The capacitor shall preferably be self-healing type. These shall be so located in inverter panels that the operating temperature does not exceed 65°C maximum.

6.5. TRANSFORMERS AND CHOKES

All transformers and chokes shall be of dry type and air cooled. This shall be class 'H' insulated, vacuum impregnated. Class F / Class B insulated cast resin



transformers and chokes are also acceptable.

6.6. STATIC SWITCHES

Static switches shall be naturally commutated type with parallel inverse connected thyristors. These shall be rated for continuous duty for 100% load. Short time rated static switches are not acceptable.

6.7. MCB

For isolating devices of various equipment, MCB shall be used. These shall be provided with overload and short circuit protective devices and shall conform to IS: 2516.

Battery Circuit Breaker shall have under voltage trip and reverse polarity protection device.

7. PAINTING

- 7.1. The enclosure after pre-treatment, shall be painted with two coats of anti-rust paint followed by two coats of anticorrosive paint.
 - 7.2. All paints shall be carefully selected to withstand tropical heat and extremes of weather. The paint shall not scale off, crinkle or be removed by abrasion due to normal handling.
 - 7.3. Unless otherwise specified, the finishing shade shall be light grey Shade No. 631 as per IS:5 or as per manufacturer's standard.
 - 7.4. Electrostatic powder paint shall be preferred.

8. INSPECTION, TESTING AND ACCEPTANCE

- 8.1. The UPS units shall be subjected to test as per relevant standards. The test shall include, but not limited to the following:
 - i) Rectifier & inverter soft starting
 - ii) Regulation test
 - iii) Heat run test for 8 hours
 - iv) Overload test
 - v) Test for changeover time in synchronised and desynchronised mode.
 - vi) Test for dynamic response and transient performance



- vii) Sequence & transfer test
- viii) Noise level measurement
- ix) Test to check the selectivity of protective devices
- x) Alarm test (simulation of various fault conditions)
- xi) Measurement of harmonic distortion
- xii) Ventilation test (operation without redundant fan)
- xiii) Insulation test
- 8.2. All the above tests shall be carried out in presence of purchaser's representative. In addition, the equipment shall be subjected to stage inspection during process of manufacture at works and site inspection.
- 8.3. These inspections shall however, not absolve the vendor from his responsibility for making good any defects, which may be noticed subsequently.

9. SPARES

- 9.1. Vendor shall provide all MANDATORYSPARES along with main equipment.
- 9.2. Any other spare parts required, but not specified, shall also be offered.

10. PACKING AND DISPATCH

- 10.1.The UPS & battery banks shall be properly packed before dispatch to avoid damage during transport, storage and handling.
- 10.2. The packing box shall contain a copy of the installation, operation and maintenance manual.
- 10.3. A sign to indicate the upright position of the panels to be placed during transport and storage shall be clearly marked. Also proper arrangement shall be provided to handle the equipment.
- 10.4 Minimum 2 years' warranty shall be provided for UPS and battery system.

11. DEVIATIONS

11.1. Deviations, if any, from this standard shall be clearly indicated in the offer with reasons thereof. Deviations from the data indicated in specification shall be shown clearly by encircling it and indicating the revised data in specification.





TECHNICAL SPECIFICATION FOR POWER & CONTROL CABLE



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SCOPE

This specification along with data sheets covers requirements for design, manufacture, testing at works and supply of Flame Retardant Low Smoke (FRLS) XLPE cables and cable terminating accessories for medium voltage systems.

2.0 STANDARDS

2.1 The cables and cables jointing & terminating accessories shall comply with the latest edition of the following standards as applicable:

IS: 1554 [Part-I]	PVC insulated (heavy duty) Electric cable	20
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IS: 7098 Cross-linked polyethylene insulated PVC sheathed

IS: 8130 Conductors for insulated electric cables and flexible cords IS:

3975 Mild steel wires, strips and tapes for armouring of cables

10810(Part 41) Methods of test for cables: Mass of zinc coating on steel

armour.

IS: 209 Specification for zinc

IS: 10418 Drums for electric cables

IS: 10810 (Pt-58) Oxygen Index test

IS: 10810 (Pt 61) Flame Retardant test

IS: 10810 (Pt 62) Fire resistance test for bunched cables

IEC: 60332-3 Tests on electric cables under fire conditions.

IEC: 60502 Extruded solid dielectric insulated power cables for rated

voltages from 1 KV up to 30kV

IEC: 60540 & 60540A Test methods for insulation and sheaths of electric Cables

ASTM: D2863 Standard method of test for flammability of plastics using

oxygen index method.

IS: 10810 Method of Test for cables; Part 43 Insulation resistance

IS: 10810 Method of Test for cables: Part 45 High voltage test.

OISD 147 Inspection and safe practice during electrical



installation

- **2.2** In addition to the above it shall be ensured that the installation conforms to the requirements of the following as applicable:
 - Indian Electricity Act and Rules.
 - Regulations laid down by CEA/Electrical Inspectorate.
 - Regulations laid down by CCE/DGMS (as

applicable).

- The petroleum rules (Ministry of Industry Government of India).
- Any other regulations laid down by central/state/local a authorities and Insurance agencies.
- 2.3 The cables and accessories shall also conform to the provisions of Indian Electricity Rules and other statutory regulations, as applicable.
- 3.0 GENERAL CONSTRUCTION
- 3.1 The cables shall be suitable for laying in trays, trenches, ducts, and conduits and for underground-buried installation with uncontrolled backfill and possibility of flooding by water and chemicals.
- 3.2 Outer sheath of all PVC cables shall be black in colour and the minimum value of oxygen index shall be 29 at $27 \pm 2^{\circ}$ C. In addition, suitable chemicals shall be added into the PVC compound of the outer sheath to protect the cable against rodent and termite attack.
- 3.3 All cables covered in this specification shall be Flame Retardant Low Smoke (FRLS) unless specified otherwise. The outer sheath of XLPE cables shall possess flame propagation properties meeting requirements as per IS-l0810(Part-62) category C1.
- 3.4 Sequential marking of the length of the cable in meters shall be provided on the outer sheath at every one meter. The embossing / engraving shall be legible and indelible.
- 3.5 The overall diameter of the cables shall be strictly as per the values declared by the manufacturer in the technical information subject to a maximum tolerance of ± 2 mm up to overall diameter of 60mm and ± 3 mm for beyond 60mm.
- **3.6** PVC *I* Rubber end caps shall be supplied free of cost for each drum with a minimum of eight per thousand-meter length. In addition, ends of the cables shall be properly sealed with caps to avoid ingress of water during transportation and storage.



- 3.7 The cables used in installations under the jurisdiction of Director General of Mines and Safety (DGMS) shall be of copper conductor only, and shall have valid DGMS approvals for the specified locations. The word" Mining Cable" shall be embossed / engraved on the cable outer sheath as per the applicable Indian Standards
- 3.8 XLPE cables
- 3.8.1 All power/control cables for use on medium voltage systems shall be heavy-duty type, 650/1100 V grade with aluminium *I* copper conductor, XLPE insulated, innersheathed, armoured and overall PVC sheathed FRLS unless specified otherwise.
- 3.8.2 The conductors shall be solid for conductor of nominal area up to and including 6 mm² and stranded beyond 6mm². Conductors of nominal area less than 16 mm² shall be circular only. Conductors of nominal area 16 mm² and above may be circular or shaped as per IS 8130.
- 3.8.3 The core insulation shall be with XLPE compound applied over the conductor by extrusion and shall conform to the requirements of Table-1 of IS: 7098 Part-1. The average thickness of insulation shall be not less than nominal value specified in Table-3 of IS: 7098 Part-1. Control cables having 6 cores and above shall be identified with prominent and indelible Arabic numerals on the outer surface of the insulation. Colour of the numbers shall contrast with the colour of insulation with a spacing of maximum 50 mm between two consecutive numbers. Colour coding for cables up to 5 cores shall be as per Indian standard.
- 3.8.4 The inner sheath shall be applied over the laid-up cores by extrusion and shall be of PVC conforming to the requirements of Type ST2 PVC compound as per IS: 5831. The minimum thickness of inner sheath shall be as per IS: 7098 (Part-I). Single core cables shall have no inner sheath.
- 3.8.5 If armouring is specified for multicore cables, the same shall be by single round galvanised steel wires where the calculated diameter below armouring does not exceed 13 mm and by galvanised steel strips where this dimension is greater than 13 mm. Requirement and methods of tests for armour material and uniformity of galvanisation shall be as per IS 3975 and IS -10810 (Part 41). The dimensions of Armour shall be as per of IS 7098 (Part -1). If armouring is specified for single core cables, the same shall be with H4 grade hard drawn aluminium round wire of 2.5 mm diameter.
- 3.8.6 The outer sheath for the cables shall be applied by extrusion and shall be of PVC FRLS compound conforming to the requirements of type ST-2 compound as per IS: 5831. The minimum and average thickness of outer sheath for unarmoured cables and minimum thickness of outer sheath for armoured cables shall be as per IS: 7098 (Part-1).

3.9 Control Cables:

Control cables shall be 1100 Volt Grade, 2.5 mm2 copper conductor XLPE insulated PVC sheathed FRLS, single wire armored with an overall PVC sheath, as per IS: 7098 part- I.



4.0 CABLE ACCESSORIES

- **4.1** The termination and straight through jointing kits for use on the systems shall be suitable for the type of cables offered as per this specification.
- **4.2** The accessories shall be supplied in kit form. Each component of the kit shall carry the manufacturer's mark of origin.
- **4.3** The kit shall include all stress grading, insulating and sealing materials apart from conductor fittings and consumable items. An installation instruction sheet shall also be included in each kit.
- 4.4 The contents of the accessories kit including all consumable shall be suitable for storage without deterioration at a temperature of 45° C, with shelf life extending to more than 5 years.

4.5 Terminating kits

The terminating kits, if used, shall be suitable for termination of the cables to indoor switchgear or to a weatherproof cable box of an outdoor mounted transformer / motor. For outdoor terminations, weather shields / sealing ends and any other accessories required shall also form part of the kit. The terminating kits shall be from one of the makes / types mentioned in the data sheet.

4.6 Jointing kits

The straight through jointing kits if used shall be suitable for installation on overhead trays, concrete lined trenches, and ducts and for underground burial with uncontrolled backfill and possibility of flooding by water and chemicals. These shall have protection against any mechanical damage and suitably designed to be protected against rodent and termite attack. The inner sheath similar to that provided for cables shall be provided as part of straight through joint. The jointing kits shall be from one of the makes / types mentioned in the data sheet.

5.0 INSPECTION, TESTING AND ACCEPTANCE

The cables shall be tested and inspected at the manufacturer's works. All the materials employed in the manufacture of the cable shall be subjected, both before and after manufacture, to examination, testing and approval by EIC / owner. Manufacturer shall furnish all necessary information concerning the supply to EIC / owner's inspectors. The inspector shall have free access to the manufacturer's works for the purpose of inspecting the process of manufacture in all its stages and he will have the power to reject any material, which appears to him to be of unsuitable description or of unsatisfactory quality. The vendor shall give at least 2 weeks advance notice to the purchaser, regarding the date of testing to enable him or his representative to witness the tests.

5.1 Cables



- 5.1.1 After completion of manufacture of cables and prior to dispatch, the cables shall be subjected to type, routine, acceptance and special tests as detailed below. EIC/Owner reserve the right to witness all tests with sufficient advance notice from vendor. The test reports for all cables shall be got approved from the Engineer before dispatch of the cables.
- 5.1.2 All routine tests, acceptance tests, type tests and additional type tests for improved fire performance shall be carried out as listed in IS: 7098 (Part-I), and IS: 7098 (Part-2) on XLPE insulated cables.
- 5.1.3 The test requirements for XLPE insulation and sheath of cables shall be as per latest revision of IS: 5831
- 5.1.4 Acceptance tests as per IS-7098 (Part-2) and the following special tests to be performed on the cables. These tests are required to be witnessed by EIC/owner before dispatch of cables.
 - a) Oxygen index test as per ASTM D-2863-77 at 21°C
 - b) Temperature index test as per ASTM D-2843-77 at 21% of oxygen
 - c) Smoke density test as per ASTM D-2843-77
 - d) Flame retardant test as per IEC 60332 part-1

5.2 Cable Accessories

Type tests should have been carried out to prove the general qualities and design of a given type of termination / jointing system as per IS-13573. The type test certificates from independent testing laboratory shall be submitted before dispatch.

6.0 MISCELLANEOUS MATERIAL SPECIFICATIONS

All materials and hardwares to be supplied by the contractor shall be new, unused and of best quality and shall conform to the latest specifications of Bureau of Indian Standards.

6.1 Cable Trays:

Cable tray shall be ladder type or perforated trays as mentioned in drawings and shall be of prefabricated hot dip galvanized iron trays comply with specifications of Bureau of Indian Standards.

Pre-fabricated hot dipped galvanized trays

The cable trays shall comply with the requirements specified in EIC installation STD.

Cable ladders/ Trays are to be manufactured from hot dip Galvanised material with UV protection features. They are heavy duty type having loading criteria and fire withstanding capacity.

Ladder type tray shall be used for Power and control cables, perforated type tray shall



be considered for instrument cables. However, perforated tray for power cable shall be considered if cable size & quantity is less.

Outdoor cable trays shall run in RCC trench/ on pipe sleepers/ on dedicated supports. Overhead cable trays if any shall be installed 2700 mm (minimum) above grade level and 300 mm above FGL. However Overhead cable tray shall be avoided as can as possible in dispensing station area.

6.2 Cable Glands:

Cable glands shall be of nickel plated brass unless otherwise specified. The industrial type double compression type cable glands shall be used for indoor panels/equipment (e.g. substation, control room etc.). The cable glands for outdoor terminations shall be weather protected, flameproof, double compression type and shall have PVC shroud for additional weather protection. Cable glands forming a part of relevant FLP enclosure shall be FLP type, tested by CMRI or any other recognized independent testing laboratory and approved by CCE/DGMS or any other statutory authority as applicable. Indigenous FLP glands shall have valid BIS license as per the requirements of statutory authorities. The size of cable glands supplied shall be appropriate to the size of cable so that flame proof property of glands is retained.

Entry thread of cable gland shall be compatible to NPT the entry thread provided in the equipment as applicable. If required, suitable reducers/adopters shall be used.

6.3 Connectors:

Power cable terminations shall be made with crimped type tinned copper/aluminium solder less lugs which shall be suitable for the cable size mentioned in cable schedule.

6.4 Ferrules:

Ferrules shall be of approved type and of size to suit core size mentioned and shall be employed to designate the various cores of control cable by the terminal numbers to which the cores are connected, for ease of identification.

7.0 CABLE LAYING

7.1 GENERAL

Cable installation shall include power, control, lighting etc. cables. These shall be laid in trenches/ cable trays as detailed in the cable layout drawings. Cable routing given on the cable layout drawings shall be checked in the field so as to avoid interference with structures, heat sources, drains, piping, air- conditioning duct if any etc. Any change in routing shall be done to suit the field conditions wherever deemed necessary, after obtaining approval of Engineer-in- charge.

7.1.1 LT power and control cables shall be laid in a same cable tray unless otherwise specified as shown on layout drawings/installation standards. If details of cable routes and cable spacing is not shown in detail on drawing, it shall be determined by the



contractor and approved by the engineer in-charge.

When single core cables are laid in flat formation, the individual cable fixing clamps and spacers shall be of non-magnetic material. As a general practice, the sheath of single core cables shall be earthed at one point to keep sheath at earth potential unless otherwise stated. Single core cables, when laid in trefoil formation shall be braced by suitable clamps at a distance, not exceeding 3 meters along the cable routing.

The Telephone, Communication and Fire alarm cables shall run on instrument trays. Minimum 300mm space clearance shall be maintained between electrical and instrument cable trays.

7.1.2 The lengths indicated in the cables schedule are only approximate. The contractor shall ascertain the exact length of cable for a particular feeder by measuring at site. All cable routes shall be carefully measured. Before the start of cable laying, the contractor shall prepare cable drum schedule and get that approved by Engineer-in charge to minimise/avoid straight through joints and then the cables cut to the required lengths, leaving sufficient lengths for the terminations of the cable at both ends. The various cable lengths cut from the cable reels shall be carefully selected to prevent undue wastage of cables. Extra loop length shall be given for feeder cables where required as per the directions of Engineer-in- charge to meet contingencies

Cables shall be laid in RCC trench with cable trays (underground trench) or in directly buried trench as shown on cable layout drawings. Both electrical and instrument trays shall be run in same trench in different levels.

- 7.1.3 Cables shall be neatly arranged in the trenches / trays in such a manner that criss-crossing is avoided and final take off to the motor / switchgear is facilitated. Arrangement of cables within the trenches / trays shall be in line with cable layout drawings. Cable routing between cable trench and equipment/motors shall be taken through GI pipe sleeves of adequate size wherever applicable. Pipe sleeves shall be laid at an angle of maximum 45° to the trench wall. Bending radii of pipes shall not be less than 8D. It is to be ensured that both the ends of GI pipe sleeves shall be sealed with approved weather proof sealing plastic compound after cabling. In places where it is not possible, cables shall be laid in smaller branch trenches.
- 7.1.4 All cables shall be identified close to their termination point by cable tag numbers as per cable schedule. Cable tag numbers shall be punched on aluminium straps (2mm thick, 20 mm wide and of enough length) securely fastened to the cable and wrapped around it).

Each underground cable shall be provided with cable tags of lead securely fastened every 30 m of its underground length with at least one tag at each end before the cable



enters/leaves the ground. In unpaved areas, cable trenches shall be identified by means of cable markers as per installation drawing. These cable markers shall be placed at location of changes in the direction of cables and at intervals of not more than 30 m and also at cable straight through joint locations.

- 7.1.5 All temporary ends of cables must be protected against dirt and moisture to prevent damage to the insulation. For this purpose, ends of cables shall be taped with an approved PVC end cap or rubber insulating tape.
- 7.1.6 Each row of cables shall be laid in place and before covering with sand incase if buried trench. All wall openings/pipe sleeves shall be effectively sealed after installation of cables to avoid seepage of water inside building/lined trench. Every cable shall be given an insulation test in presence of Engineer-in- charge/Owner before filling the cable trench with sand Any cable which is found defective shall be replaced.
- 7.1.7 Where cables pass through foundation walls, the necessary openings shall be provided in advance for the same. However, should it become necessary to cut holes in existing structures for example floor slab etc., the electrical contractor shall determine their location and obtain approval of the Engineer-in-charge before carrying out the same.
- 7.1.8 Cables for road crossings shall be taken through ERC (Electrical Road Crossing) as shown in the cable layout drawings.

At road crossing and other places where cables enter pipe sleeves adequate bed of sand shall be given so that the cables do not slack and get damaged by pipe ends.

- 7.1.9 Ends of cables leaving trench shall be coiled & capped and provided with protective cover till such time the final termination to the equipment is completed.
- **7.2** Cables laid direct in ground

Cables shall be laid underground in excavated cable trenches where specified in cable layout drawings. Trenches shall be of sufficient depth and width for accommodation of all cables. Cables shall be properly spaced and arranged with a view of heat dissipation and economy of design. Maximum number of cable layers in trench shall be preferably limited to 5 layers.

Minimum depth of cable trench shall be 750 mm for LT Cables. The depth and the width of the trench shall vary depending upon the number of layers of cables as per EIC installation Standards

Cables shall be laid in buried trenches at depth as shown in the cable layout drawings. It is to be insured by the contractor that the bottom of buried trenches shall be cleared



of all rocks, stones and sharp objects before cables are placed. The trench bottom shall be filled with a layer of sand. This sand shall be leveled and cables laid over it. These cables shall be covered with 150mm of sand on top of the largest diameter cable and sand shall be lightly compacted. A flat protective covering of 75 mm thick second class red bricks shall then be laid and the remainder of the trench shall then be back -filled with soil, rammed and leveled.

7.3 Cables laid in concrete trench

Cables shall be laid in cable tray with 3 tiers maximum in concrete trench as shown on layout drawings. RCC covers of trenches shall be effectively sealed to avoid ingress of chemical and oil in process area. Removal of concrete covers where required for the purpose of cable laying and reinstating them in their proper position after cables are laid shall be done by electrical contractor.

All wall openings/pipe sleeves shall be effectively sealed after installation of cables to avoid seepage of water.

7.4 Above ground cables

- 7.4.1 Cable laid on supporting angle in structures, columns and vertical run of cable trays shall be suitably clamped by means of G.I. saddles / clamps, whereas cables in horizontal run of cable trays shall be tied by means of nylon cords. Distance between supporting angles shall not exceed 600 mm.
- 7.4.2 All cable trays (other than galvanised trays) and supporting steel structures shall be painted before laying of cables. The under surfaces shall be properly degreased, derusted, de-scaled and cleaned. The painting shall be done with one coat of redoxide zinc chromate primer. Final painting shall be done with two coats of approved bituminous aluminium paint unless otherwise specified.
- 7.4.3 Where cables rise from trench to motor, lighting panel, control station, junction box etc., they shall be taken in GI pipe for mechanical protection upto a minimum of 300 mm above grade. Cable ends shall be carefully pulled through conduit to prevent damage to cable.
- 7.4.4 All G.I. Pipes shall be laid as per layout drawings and site conditions. Before fabrication of various profiles of pipes by hydraulically operated bending machine (which is to be arranged by the contractor) all the burrs from the pipes shall be removed. GI Pipes having bends shall be buried in soil/concrete in such a way that the bend shall be totally concealed. For G.I. pipes buried in soil, bitumen coating shall be applied on the buried lengths, Installation of G.I. pipes shall be undertaken well before paving is completed and necessary coordination with paving agency shall be the responsibility of ElectricalContractor.

Following guide shall be used for sizing of G.I. pipe.



- a) 1 cable in a pipe 53% of pipe cross-sectional area occupied by cables.
- b) 2 cables and above cables in a pipe 40% of pipe cross-sectional area occupied by cables.
- 7.4.5 After the cables are installed and all testing is complete, conduit ends above grade shall be plugged with a suitable weatherproof plastic compound/bitumen/suitable sealing compound. Alternatively, rubber bushes shall be employed for the purpose of sealing.
- 7.4.6 GI PIPES All the pipes supplied shall be suitable for cable drawing, without any internal burrs, smooth internal surface and threaded at both ends with coupling at one end Class "B" type GI pipes as per IS shall be used for the following cable routes: a. Cables running on floor shall be laid in buried pipes. b. All cables laid upto a level +200mm from floor level shall be in GI pipes. c. Cables crossing road, entering building from outside through wall/foundations etc. shall be laid in GI pipes. d. All GI pipes shall have a suitable fish wire for drawing cable.

8. TERMINATIONS

8.1 All XLPE cables up to 1100V grade shall be terminated at the equipment by means of compression type cables glands suitable for the cable size. They shall have a screwed nipple with conduit electrical threads and check nut. The cables shall be identified close to their termination points at both the ends of cable (cable numbers shall be punched on aluminium straps 2 mm thick and securely fastened to the cable, wrapped around it) and also along the route at recommended intervals, by cable tag numbers.

All cable entries for outdoor termination shall be preferably through bottom. Outdoor cable termination through top of equipment shall not be permitted.

- 8.2 Power cables cores wherever colour coding is not available shall be identified with red, yellow and blue PVC tapes. Where copper to aluminium connections are made, necessary bimetallic washers shall be used.
- 8.3 In case of control cables, all cores shall be identified at both ends by their terminal numbers by means of PVC ferrules suitable for core size. Wire numbers shall be as per manufacturer's schematic/ wiring/inter-connection diagram. All unused spare cores of control cables shall be neatly bunched and ferruled with cable tag at both ends, for future use.
 - For trip circuit identification additional red ferrules shall be used only in the particular cores of control cables at the termination points in the Switchgear/ Control panels and Control Switches.
- 8.4 Contractor shall drill holes for fixing glands wherever necessary. Gland plate shall



be of non- magnetic material/ aluminium sheet in case of single core cables. All unused cable entries on equipment/panels shall be plugged/sealed.

- 8.5 The cable shall be terminated at electrical equipment/switchboards through glands of proper size. The individual cores shall then be dressed and taken along the cables ways or shall be fixed to the panels with polyethylene straps. The cable glanding shall be done as per manufacturer's instructions. Cable armour shall not be exposed after termination is complete. In case of termination of cables at the bottom of a panel over a cable trench having no access from the bottom close fit holes shall be drilled in the gland plate for all the cables in one line, then gland plate shall be split in two parts along the centre line of holes. After fixing bottom plate, uncovered cable holes/gaps shall be sealed with cold setting compound.
- 8.6 Crimping of lugs to cable leads shall be done by hand crimping / hydraulically operated tool as per requirement. Insulation of the leads shall be removed before crimping. Conductor surface shall be cleaned and shall not be left open. Suitable conducting jelly shall be applied on the conductor lead. Lugs shall enclose all strands of cable core. Cutting of strands shall not be allowed.
- 8.7 The contractor shall bring to the notice of Engineer-in-charge any mismatch in cable glands, lugs provided with the equipment vis-a-vis to the cable size indicated in cable schedule for taking corrective action.
- 8.8 The cable joints in power and control cables shall be avoided as far as possible. In case a joint is unavoidable, the following shall be insured:
 - The number of joints shall be restricted to minimum as far as possible.
 - The location of joints shall be identified with permanent markers.
 - No joints shall be allowed in hazardous areas without the approval of Engineer-in-charge.

The jointing and termination of medium voltage power cables shall be carried out by trained personnel only. Jointing and termination of high voltage cables shall be done by skilled and experienced jointer duly approved by Engineer-in-charge. Only type tested termination kits of approved make shall be used.

8.9 No unauthorized repairs, modifications shall be carried out on the hazardous area equipment terminal boxes and junction boxes. Damaged enclosures of hazardous area equipment shall be brought to the notice of Engineer-in-charge by contractor. After termination is complete, all the bolts, nuts, hard wares of terminal box shall be properly placed in its position and tightened.



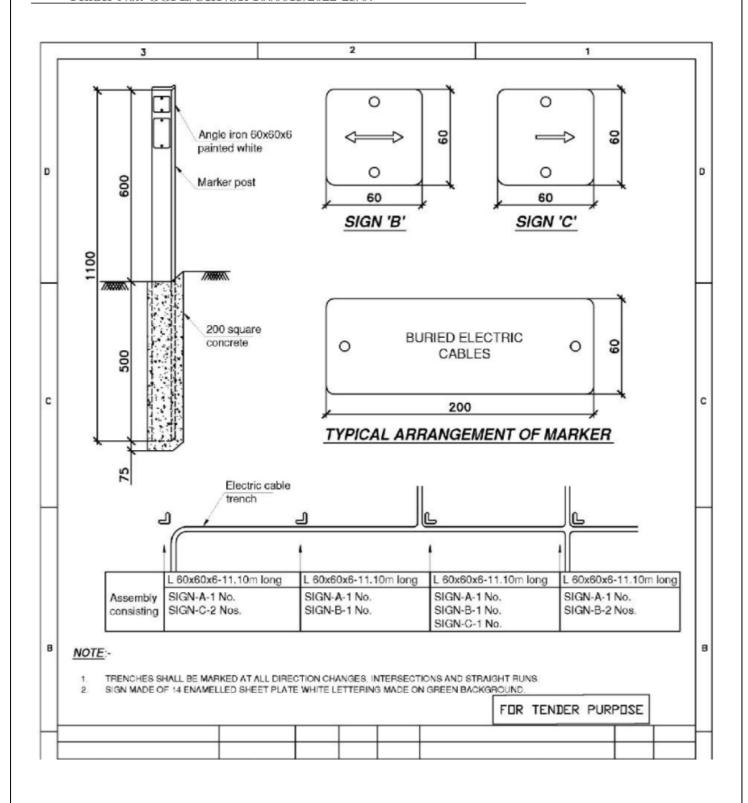
9. TESTING AND COMMISSIONING

- 9.1 Field testing and commissioning of electrical installation shall be carried out as per specification and relevant Indian standards.
- 9.2 Before energizing, the insulation resistance of every circuit shall be measured from phase to phase, phase to neutral and from phase/ neutral to earth.
- 9.3 Where terminations are required in circuits rated above 650 volts, insulation resistance of each length of cable shall be measured before terminating. After completion of terminations measurements shall be repeated.
- 9.4 For cables up to 1.1 kV grade 1000 V Megger shall be used.
- 9.5 Cable schedule, cable layout drawings, Interconnection drawings shall be marked by contractor's 'AS BUILT STATUS' and two sets of copies shall be submitted to EIC/Owner.

10. PACKING AND DESPATCH

- 10.1 Cables shall be dispatched in non-returnable wooden or steel drums of suitable barrel diameter, securely battened, with the take-off end fully protected against mechanical damage. The wood used for construction of the drum shall be properly seasoned, sound and free from defects. Wood preservatives shall be applied to the entire drum. Ferrous parts used shall be treated with a suitable rust preventive finish or coating to avoid rusting during transit or storage.
- 10.2 On the flange of the drum, necessary information such as project title, manufacturer's name, type, size, voltage grade of cable, length of cable in meters, drum no., cable code, BIS certification mark, gross weight etc. shall be printed. An arrow shall be printed on the drum with suitable instructions to show the direction of rotation of the drum.
- 10.3 A tolerance of ± 3 % shall be permissible for each drum. However, overall tolerance on each size of cable shall be limited to ± 2 %. Offers with short / non- standard lengths are liable for rejection. If non-standard drum lengths are specified in the data sheet, the same shall be supplied.







TECHNICAL SPECIFICATION FOR LIGHTING SYSTEM



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SCOPE

1.0 This specification defines the requirements for the supply of equipment, materials, installation, testing and commissioning of the lighting system (lighting fixtures, lighting/power distribution etc.).

2.0 CODES AND STANDARDS

- 2.1 The work shall be carried out in the best workmanlike manner, in conformity with this specification WGI Installation Standards, and the relevant specifications/ codes of practice of the Bureau of Indian Standards.
- 2.2 In addition to the above it shall be ensured that the installation conforms to the requirements of the following as applicable:
 - a) Indian Electricity Act and Rules.
 - b) Regulations laid down by CEA/Electrical Inspectorate.
 - c) Regulations laid down by CCE/DGMS (as applicable).
 - d) The petroleum rules (Ministry of Industry Government of India).
 - e) Any other regulations laid down by central/state/local authorities and Insurance agencies.

3.0 EQUIPMENT SPECIFICATIONS

All materials, fittings and appliances to be supplied by the contractor shall be new, unused and of the best quality and shall conform to the specifications given hereunder. These shall be manufactured in accordance with the latest revision of the specifications of Bureau of Indian Standards/International standards. In the absence of any specifications for a particular item, contractor shall bring material samples along with proven track record to site and get the same approved by Engineer-in-Charge/Owner before installation.

3.1 Lighting and Power Distribution Board

Lighting and Power DBs shall be of sheet steel construction (2mm thickness) and shall be dust and vermin proof, suitable for surface or flush mounting on wall surface type. The DBs shall be indoor type. Indoor type DBs shall have IP54 degree of protection. The LDBs shall be of reputed make and MCBs used shall be of reputed make as per the approved list of the Makes. The MCBs shall be rated for 10 kA fault rating. Each LDB shall be provided with ELCB and MCB of adequate rating and type (TPN/DP as required) on the incoming side and required nos. of MCBs on the outgoing side. Minimum 20% spare MCBs shall be provided on the outgoing side. All metal surfaces shall be cleaned free of rust, given a coat of red-oxide primer and finished with two coats of epoxy based paint of shade 632 of IS 5.



Lighting and Power DBs shall have FP incoming feeder and single/three phase outgoing feeders. Lighting circuit feeders shall be rated for 10/16 amps and power circuit feeders shall have current rating of 16Amps.DBs shall be equipped with phase and neutral bus bars of required current carrying capacity. The outgoing feeders for shall be provided with single pole miniature circuit breakers (MCBs) for safe areas and double pole MCBs for hazardous areas. Miniature circuit breakers shall be mounted in such a way that the operating levers shall not be projected outside the door cover. Only the indication lamps and meters and pushbuttons shall be projected outside or mounted on the panel door. A hinged door to cover the operating knobs shall be provided. In addition, a circuit diagram indicating incomer details and outgoing details viz. Circuit number, circuit rating, load connected and details of the load shall be pasted inside the panel. Also a laminated copy of the diagram shall be provided inside the panel in a suitably, designed pocket. Two external earthing studs for connection to the plant earthing grid shall be provided on the panel. Further, the panel shall be provided with an earth bus bar with terminal studs for connection to the third core of each outgoing circuit. Each circuit phase and neutral shall be given ferrule numbers. Complete wiring inside the panel, shall be neatly bunched with PVC tape and button. Sufficient terminals shall be provided in the terminal block so as to ensure that no more than one wire (core) is connected to a terminal. The panel shall have knock out holes or removable gland plate for the entry of incoming and outgoing conduits or cables form bottom.

Wherever the size of incoming cable to lighting, power DBs is more than 35 sq. mm a suitable cable adapter box shall be provided and attached to the panel. The incoming cable leads shall be connected to terminal block (bolted type terminals) of required size. This terminal block shall be connected to FP incomer unit through separate PVC insulated copper conductor wires/bus bars. Sufficient space shall be provided (200 to 250mm) between gland plate and the bottom of terminal block for easy termination.

3.2 Lighting fixtures

The types, makes and catalogue numbers of various types of industrial/flameproof lighting fixtures shall be selected suitable for this project application (CNG stations) from the approved or reputed vendors. The electrical contractor shall provide the catalogues & data sheets for the selected light fitting for the approval of EIC before purchasing it. LED lighting fixtures shall be complete with ballast, starters and capacitor, as required. The fixtures shall be of high power factor type i.e. at least 0.9 or more.

3.3 Switches

Switches, manufactured in accordance with IS: 13947 shall be used for non hazardous areas. Switches in areas where concealed wiring has been adopted, shall be flush mounting piano type unless otherwise specified. For surface conduit wiring, piano type switches in surface mounted box shall be provided.



3.4 Outlet Boxes

The outlet boxes used as point outlets shall be prefabricated type 65mm deep junction boxes. Outlet boxes custom fabricated for fixtures, shall be made of M.S. Sheet having minimum thickness of 1.6mm. Outlet boxes shall be galvanized after fabrication. These shall be complete with terminal block suitable for connection of wires up to 4 sq. rnrn Front cover plate shall be of 3mm thick backelite / PE sheet. The sheet shall extend at least 2 mm on all sides of outlet box. Cover plate shall be fixed by cadmium plated brass screws and cup washers. Outlet boxes shall be provided with adequate number of knock outs on all the sides for ease of wiring either with conduits or without conduits.

3.5 Conduit and Accessories

Conduits for Electrical installations shall conform to IS: 9537. The type of conduit is GI. GI conduit shall be of 1.6mm thick and concealed type shall be used.

3.6 Lighting Poles

Lighting poles shall be fabricated (as per installation Drawing) from steel tubular pipes of specified section, with joints, swaged together when hot and bevelled on outside edges. Poles shall be coated with bituminous preservative solution on the ground portion of the outside surface. Remainder of the outside surface shall be given one coat of red oxide primer and finished with two coats of aluminium paint. A flameproof marshalling box/junction box shall be fixed near the bottom for lighting fixture cable entry looping in and looping out connection.

3.7 Wires

Wires shall be FRLS XLPE insulated and shall be of 660/1100 Volts grade as per IS:7098. Conductor shall be of stranded copper and size shall be minimum 2.5 Sq. mm for lighting. Red/Yellow/blue wires for phases, black wire for neutral and green wire for earth shall be used (size of earth wire shall be same as for phase and neutral size). Wire size for air conditioning circuit feeders shall be as indicated in the SLD/cable schedule.

4.0 LIGHTING SYSTEM

4.1 GENERAL

- 4.1.1 The lighting fixtures in the plant shall be fed from lighting DB. All outdoor lighting shall be group controlled manually or through synchronous timer.
- 4.1.2 The lighting layouts furnished by owner will indicate approximate locations of lighting fixtures. The electrical contractor shall determine, with approval of Engineer-in-Charge, the exact locations of each fixture in order to avoid interference with piping or other mechanical equipment and also with a view to obtain as much uniform illumination as practicable, and to avoid objectionable shadows. Conduits/cables shall be laid out by the contractor to suit field conditions and as per



directions of the Engineer-in-Charge.

- 4.1.3 The minimum height of any lighting fixture shall be preferably not less than 6.0 meters above the ground level in outdoor plant area.
- 4.1.4 All outdoor cable terminations to DBs shall be through bottom. Top entries for cables shall be avoided to avoid water entry. All cable glands for outdoor terminations shall be double compression type and the gland shall be covered with PVC or rubber boot shroud. All unused cable entries shall be plugged with suitable blanking plugs.
- 4.1.5 Mounting height of equipment shall be as under: -

Top of Switch Box : 1200mm from

FFL (Finished floor level) Top of

Lighting/power DB : 1800 mm from FFL.

5/15 Amp. Receptacle : 1200 mm for process areas

and industrial sheds

Lighting fixture : As indicated in layout drawing

- 4.1.6 For indoor building, fixtures shall be suspended from concrete surfaces with the help of anchor fasteners. In such cases special care shall be taken to see that anchoring is firm. In places where ceiling fans are provided, lighting fixtures shall be suspended below the level of fan to avoid shadow effect.
- 4.1.7 Circuit cables in a group shall be cleated to structure by using galvanised strip clamps or cable run in cable trays wherever trays are available. Spacers and cleats shall be of required size to accommodate the cables. All hardware shall be galvanised or zinc passivated. Underground lighting cables (in paved areas) shall be taken in suitable G.I. sleeves buried at a minimum depth of 300mm from FFL. GI pipe sleeves shall be extended to 300mm above FFL. For plant areas, lighting cable shall be directly buried and shall be taken out to the pole JB through pipe sleeve embedded in pole concrete foundation. Exact termination/layout of G.I. pipes (for protection of cables) shall be decided at site as per site convenience in consultation with Engineer-incharge.
- 4.1.8 Wiring for all outlet sockets shall be done with 3 cores of equal sizes for phase, neutral and earth. The terminals of switch sockets shall be suitable to receive the size of wire specified.
- 4.1.9 All lighting fixtures shall be provided with terminal block with required terminals



suitable for connection of wire up to 2.5 sq. mm copperconductor.

- 4.1.10 The cable shall be straightened after unwinding it from the drum. All cables be clamped/laid in straight run without any sag and kink.
- 4.1.11 For location where fan points are shown, fan hooks with junction box shall be provided during concreting. Where fan hooks and J.Bs. are provided separately JB shall be located within a distance of 300mm from hook for mounting of ceiling rose.
- 4.1.12 Industrial type plug sockets with 25A MCB or rating shall be provided at a height of 500mm from FFL for window AC units. Socket outlets and plugs for installation in electrical building, workshop, maintenance shop etc. shall be of industrial metal clad type.

4.2 Conduit System

- 4.2.1 C on ce alled conduit system of wiring shall be adopted, as specified in the drawings. Required number of pull boxes shall be used at intervals to facilitate easy drawing of wires. Separate conduit shall be run for lighting and power circuits. Conduit layout shall be decided at site as per site conditions. Drop conduits for switch boards shall be decided by contractor as per wall locations shown in Architectural drawings.
- 4.2.2 Only threaded type conduit fittings shall be used for metallic conduit system. Pin grip type or clamp type fittings are not acceptable. Conduit ends shall be free from sharp edges or burrs. The ends of all conduits shall be reamed and neatly bushed.
 - Conduit shall be of minimum 25mm dia. Maximum number of wires permissible in a conduit shall be seven/nine for wire size of 2.5 sqmm/1.5 sqrnm. respectively.
- 4.2.3 The conduit shall not be exposed anywhere in the building. In canopy area, conduit shall be concealed type.
- 4.2.4 Where concealed wiring is done, junction boxes (65mm deep) shall be used so as to rest on shuttering properly. Conduits shall be laid above reinforcement. All conduit connections shall be properly screwed and Junction box covers shall be properly fitted so as to avoid entry of concrete slurry.
- 4.2.5 Where concealed wiring is to be adopted, conduits shall be laid in time before concreting of the slab. Pull wire (GI or steel) shall be provided inside conduit for the ease of wire pulling. The contractor shall coordinate his work with other agencies involved in the civil works in such a way, that the work of the other agencies is not hampered or delayed. Vertical conduit runs shall be made in wall before plastering is done so as to avoid chasing. Where chases are made for conduit run contractor shall



fill these chases or any other openings made by them after completing the work and patch the surface. During installation, care shall be taken to see that proper covers are provided to prevent rusting of conduits. Locations of all point outlets, junction boxes shall be marked with brick powder or sand so that these are easily identified after shuttering removal. As built conduit layout drawing shall be submitted by contractor after completion of the work.

- 4.2.6 All bends and other accessories shall be of the same material as that of conduit and shall have the same protective coatings. All junction boxes shall be MS chromium plated.
- 4.2.7 The conduit system shall be tested, for mechanical and electrical continuity and shall be permanently connected to earth by means of approved type of earthing clamps.

4.3 Hazardous Area

- 4.3.1 Wiring in hazardous area shall be done by using minimum 2.5mm² copper conductor FRLS, XLPE armoured cable. Circuit wiring feeding hazardous areas shall be controlled by two pole switches/MCBs (for phase as well as neutral isolation).
- 4.3.2 Correct type of lighting equipment (fixtures and JBs) with regard to hazardous protection as specified in the drawing, shall be installed for the areas classified as Zone I, Zone 2 etc.
- 4.3.3 Hazardous area yard lighting shall be pole mounted type. Lighting pole shall be steel tubular swaged type same as pole used for street lighting fixtures. The terminations in the junction boxes and the lighting fittings shall be done avoiding possibility of loose connections due to vibrations. After the terminations are made the cover of the junction boxes and the lighting fittings shall be closed properly with all bolts and hard wares in correct position, retaining its explosion and weather protections.
- 4.3.4 Cable glands for terminating cable on flameproof equipment shall be of double compression FLP type. Any material/equipment specified to be supplied by contractor for installation in hazardous areas, shall be tested by CMRI and duly approved by C.C.E. or DGMS or any other applicable statutory authority. All indigenous FLP equipment shall also have valid BIS license as required by statutory authorities.

4.3.5 FLP Junction Box:

IP Rating : 65

Material : Aluminium
Type : Flameproof
Approval : CIMFR / PESO



Cable Entry : as per requirement

Junction box should have adequate Terminal blocks for connections and all the unused cable entries shall be properly closed with brass dummies. A 2A DP MCB should be provided in the JB.

4.4 Building Lighting

- 4.4.1 The type of wiring system shall comprise surface/concealed conduit system or cable wiring as specified on layout drawings.
- 4.4.2 All lighting fixtures in indoor building shall be ceiling mounted. Mounting details of fixtures shall be indicated on the drawings.
- 4.4.3 Wiring in areas above false ceiling shall be done in Surface Conduit (25mm dia GI conduit) suitably clamped to the true ceiling. Vertical drops from true ceiling for DBs, switches, receptacles etc. shall be taken in 25mm dia PVC conduit concealed in walls up to switchboards/DBs. Lighting fixtures shall be supported from true ceiling. Exact location of fixtures shall be finalized in co-ordination with air-conditioning layout, DBs layout and false ceiling grid layout. To facilitate easy maintenance 'Looping back system' of wiring shall be followed throughout. Accordingly supply tappings and other interconnections including for earthing are made only at fixture connector blocks or at switch boards. Required number of junction boxes shall be used at intervals for wire pulling and inspection.
- 4.4.4 All wires in conduit shall be colour coded as specified. Each circuit shall have independent phase neutral and earth wire. However, when group of circuits are run in a single conduit the earth wire can be common.
- 4.4.5 Building conduit lighting system of wiring where measurement is done on point wiring basis generally consists of two parts. The first part is the circuit wiring which includes the work necessary from lighting panel up to switch box and from switch box to another switch box. The second part is the point wiring which shall include the work necessary from tapping point in the switch box upto various fixtures or fan outlets/ceiling roses.
- 4.4.6 In no case, two different sources or two different phases of supply shall be combined in one switchboard.
- 4.4.7 Switches for light fixtures/exhaust fans in battery room shall be provided outside the Battery room.

4.4.8 20W, 4 Feet, LED Tube Light, Cool Day Light

Light Type : LED



Tender No.: GGPL/C&P/SR 1000013/2022-23/07

Wattage : 20 Watts

Light Colour : Cool Daylight
Voltage : 230 Volts
Brightness : 2000 Lumen

Material : Plastic

4.4.9 10W, B22 LED Bulb, 900lm, Cool Day Light

Light Type : LED

Wattage : 10 Watts

Light Colour : Cool Daylight

Voltage : 230 Volts Brightness : 900 Lumen

Material : Plastic Bulb Base : B22D

4.4.10 B22 Bulb holder

Material : Polycarbonate

Colour : White Base Type : B22

4.5 Street Lighting

- 4.5.1 Street lighting poles to be located on road side shall be installed at a minimum distance of 300mm from the edge of the walkway of the road. Size of wires from marshalling box / Junction box up to fixture shall be min. 2.5mm2, copper conductor XLPE insulated FRLS.
- 4.5.2 Each pole shall be earthed at one point by connecting to the plant earth grid as shown on Installation standards.
- 4.5.3 Street lighting fixture shall be mounted on steel tubular poles as per standard drawings. The foundation for the street lighting poles will be made by electrical contractor. Street lighting poles shall be supplied with a base plate.
- 4.5.4 The poles shall be numbered as per the drawings/ directions of Engineer in-charge.

5.0 TESTING AND COMMISSIOING

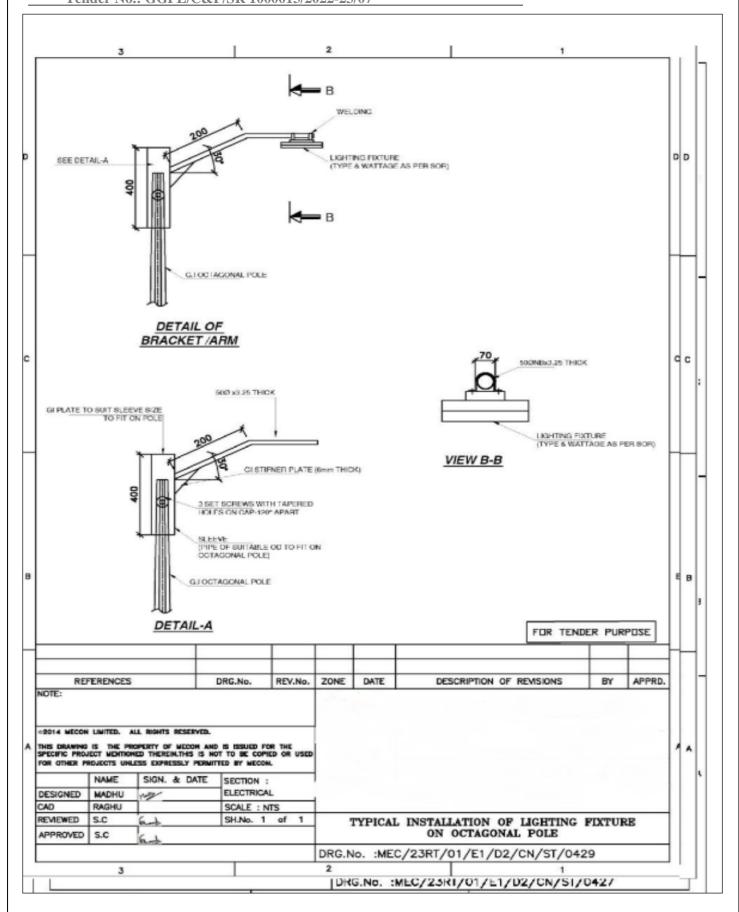
5.1 Lighting installation shall be tested and commissioned by installation contractor as per Owner's specifications.

Pre-commissioning checks and tests, shall include but not be limited to the following:

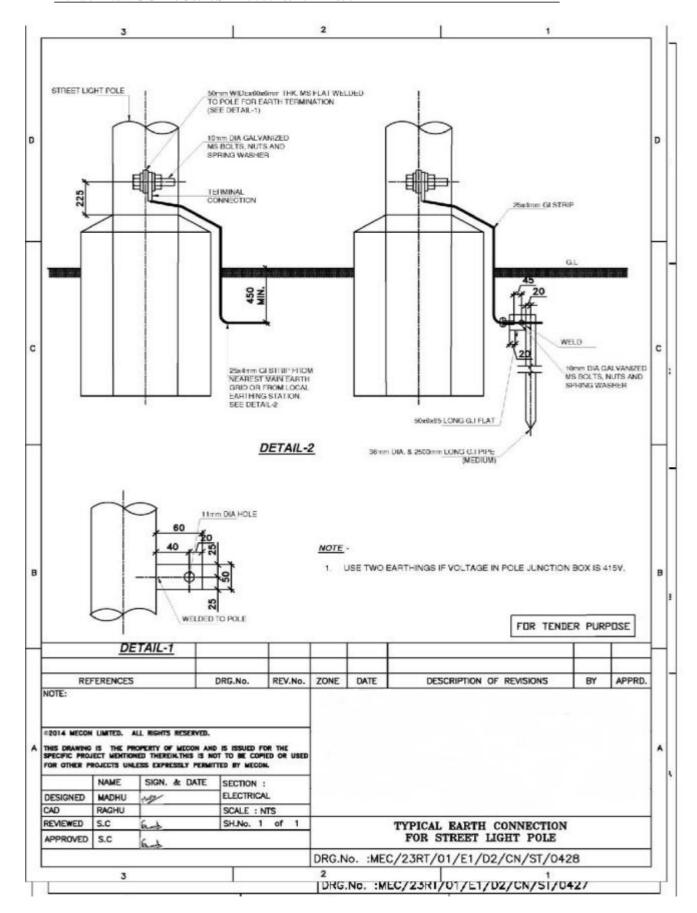


- a) The insulation resistance of each circuit without the lamps (load) being in place shall be measured and it should not be less than 500,000 ohms. (Between phases, phases to neutral, phase/neutral to Earth).
- b) Current and voltage of all the phases shall be measured at the lighting panel bus bars with all the circuits switched on with lamps. If required load shall be balanced on the three phases.
- c) The earth continuity for all socket outlets shall be checked. A fixed relative position of the phase and neutral connections inside the socket shall be established for all sockets.
- d) After inserting all the lamps and switching on all the circuits, minimum and maximum illumination level shall be measured in the area and recorded.
- e) It shall be ensured that switch provided for ON/OFF control of point (light/fan/socket) is only on phase (Live) side.
- (f) Operation of ELCB's shall be checked.
- (g) Contractor shall duty fill in all the above test results and submit the test reports to Engineer-in-Charge in triplicate.
- All lighting layout drawings shall be marked by contractor for 'AS BUILT STATUS' and two sets of copies shall be submitted to Owner/EIC.

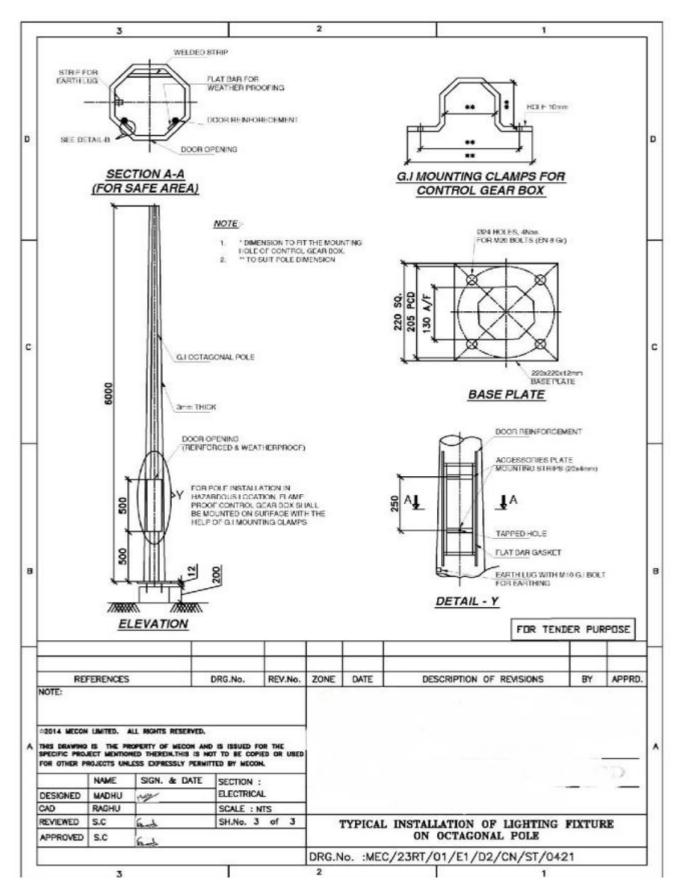




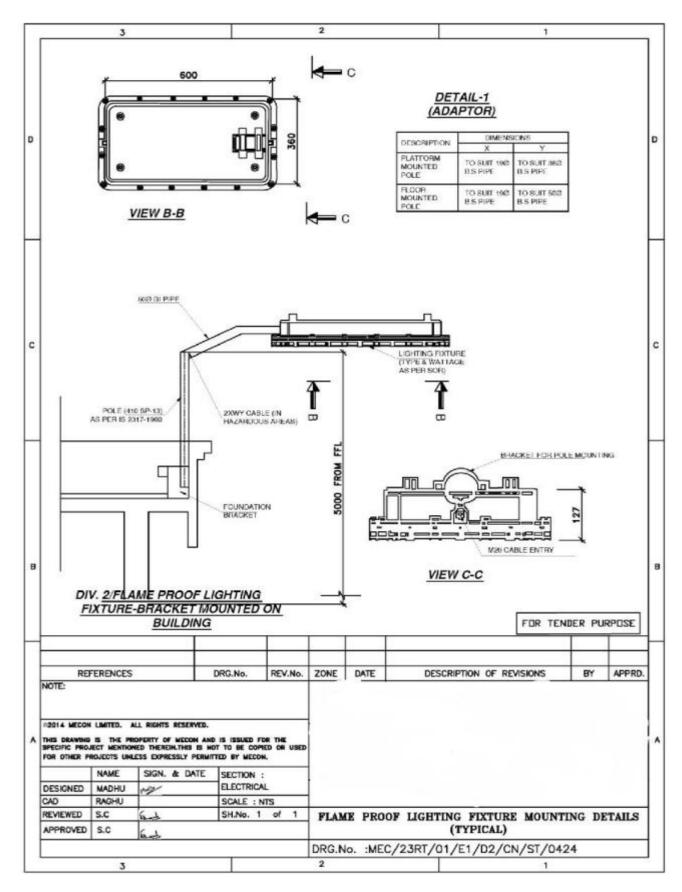
















TECHNICAL SPECIFICATION FOR EARTHING SYSTEM



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1.0 SCOPE

This specification defines the requirements for the supply of earthing materials and installation of the earthing systems.

2.0 CODES AND STANDARDS

2.1 The work shall be carried out in the best workman like manner / conformity with this specifications, owner's installation Standards, layout drawings, the latest edition of relevant specifications, codes of practice of Bureau of Indian Standards and OISD Standards listed below:

SP: 30 (BIS)	Special Publication – National Electrical Code
IS: 2309	Protection of buildings and allied structures against lightning.
IS: 3043	Code of practice for earthing
IS: 7689	Guide for control of undesirable static electricity.
OISD 110	Recommended practices on static electricity
OISD 147	Inspection and safe practice during electrical installation.

- 2.2 In addition to the above it shall be ensured that the installation conforms to the requirements of the following as applicable:
 - Indian Electricity Act and Rules.
 - Regulations laid down by CEA/Electrical Inspectorate.
 Regulations laid down by CCE/DGMS (as applicable).
 - The petroleum rules (Ministry of Industry Government of India).
 - Any other regulations laid by central/state/local authorities and Insurance agencies.

3.0 MATERIAL SPECIFICATIONS

- 3.1 All materials and hardwares to be supplied by the contractor shall be new, unused and of best quality and shall conform to the specifications given here under and to latest specifications of Bureau of Indian Standards. Contractor shall bring material samples to site and get it approved by Engineer-in-charge before installation.
- 3.2 The main grid conductor shall be hot dip galvanized G.I. strip. Sizes for main conductors shall be marked on the drawings. Thickness of hot dip galvanizing shall not be less than 75 microns. Earth electrodes shall be as per owner's standard drawing.



4.0 EARTHING NETWORK

- 4.1 This consists of main earth conductor (grid conductor) forming a closed ring network with required number of earth electrodes connected to it to provide a common earth for electrical devices and metallic structures. From each earth electrode two distinct connections shall be made to the main earth conductor. The earth plates shall be used for taking multiple earth connections to two or more equipment.
- 4.2 The main earth conductor shall be directly buried or laid along cable trays/cable trench as indicated on the earthing layout drawing. Where installed in lined cable trenches, it shall be firmly cleated to the sidewall of concrete trenches using GI clamps at interval of 400 mm to 500 mm and near to the termination end. The earthing conductor shall run in trench along cable trays route. The cable trays on the same cable route s h all be earthed at a regular interval of 10 meter. The earthing for equipment shall be tapped from the main earth conductor and not from cable tray support structure. Earth conductor when laid underground shall be at a depth of 600 mm below finished grade level.
- 4.3 Joints and tapping in the main earth loop shall be made in such a way that reliable and good electrical connections are permanently ensured. All joints below grade shall be welded and shall be suitably protected by giving two coats of bitumen and covering with Hessian tape. Earth strip laid above ground shall be welded across straight through joints and joints shall be suitably protected by giving two coats of bitumen to avoid oxidation and insulation film formation of the strip surface. When two earth strips are to be jointed by means of welding, lap welding with an overlapping of strip equivalent to double the width of the strip and all four sides shall be continuously welded. All joints at tapping above ground shall be by means of connector/lugs. A minimum of two bolts of adequate size shall be used for this purpose. Earthing strip joints at earth plate and equipment shall be through GI bolts, nut etc.

5.0 INSTALLATION OF EARTH ELECTRODE

- 5.1 Earth electrodes shall be installed as shown in the earthing layout drawing and in accordance with the standard drawings. Earth pits shall be constructed & located as per the IS: 3043 and consist of 3m long, 65 mm N.B (76mm outer dia) GI pipe electrode and their location shall be marked to enable accurate location by permanent markers.
- **5.2** All earth electrodes shall preferably be driven to a sufficient depth to



reach permanently moist soil. Electrodes shall preferably be situated in a soil which has a fine texture and which is packed by watering and ramming as tightly as possible. Wherever practicable, the soil shall be dug up, all lumps broken and stones removed from the immediate vicinity of the electrodes. Earth pit with all accessories shall be provided as per drawings.

- **5.3** All earth electrodes shall be tested for earth resistance by means of standard earth test meter. The tests shall take place in dry months, preferably after a protracted dry spell.
- **5.4** The electrodes shall have a clean surface, not covered by paint, enamel, grease or other materials of poor conductivity.
- **5.5** Earth electrodes shall be located avoiding interference with road, building foundation, column etc.
- **5.6** The disconnect facility shall be provided for individual earth pits to check their earth resistance periodically.
- **5.7** The distinct No. shall be provided on all earth electrode as per approved drawing. Earth resistance, date shall be marked on a plate above gradelevel.

6.0 CONNECTION

All electrical equipment is to be suitably earthed The earth system connections shall generally cover the following:

- Equipment earthing for personnel safety.
- System neutral earthing
- Static and lightning protection
- **6.1** The following shall be earthed.
 - System neutral should not be connected to
 - Current and potential transformer secondary neutral
 - Metallic non-current carrying parts of all electrical apparatus such as transformers, switchboards, bus ducts, motors, neutral earthing resistors, capacitors, UPS, battery charger panels, welding receptacles, power sockets, lighting/power panels, control stations, lighting fixtures etc.
 - Steel structures/columns, rail loading platforms etc.
 - Cable trays and racks, lighting mast and poles
 - Storage tanks, spheres, vessels, columns and all other process



equipment.

- Fence and Gate for electrical equipment (e.g. transformer, yard etc.)
- Cable shields and Armour
- Flexible earth provision for Wagon, Truck

Conductor size for branch connection to various equipment shall be as per Owner's Installation Standards unless otherwise stated on earthing layout drawings.

- 6.2 All process pipelines shall be bonded and earthed at the entry and exist points of battery limit of hazardous area.
- **6.3** Steel pipe racks in the process units and offsite area shall be earthed at every 25 meters.
- **6.4** Equipment foundation bolts shall not be used for earthing connection.

6.5 LIGHTNING PROTECTION

Lightning protection shall be provided for the equipment, structures and buildings as shown on layout drawing. An independent earthing network shall be provided for lightning protection. Lightning protection system shall generally comprise lightning finials (air terminals), roof conductors, down conductors, test links, and earth electrodes. The number, types, materials and sizes shall be in accordance with the drawings. Air terminals shall be mounted on top of buildings or structure as required. All air terminals shall be inter-connected with roof conductors, pipes, hands rails or any other metallic projection above the roofs shall also be bonded to the roof conductors. Down conductors from air terminals or from roof conductors shall be routed as directly as possible to the test links on earth buses, with minimum bends. All provisions regarding connections of conductors for equipment earthing system shall also apply to lightning protection system. In corrosive atmospheres, plumbing metal for corrosion protection shall cover lightning finials or air terminals.

Self-conducting structures having metal thickness of more than 4.8mm may not require lightning protection with aerial rod and down conductors. They shall, however, be connected to the earthing system, at least, at two points at the base of equipment. All major structural steel, stacks, vessels and process equipment likely to become charged with static electricity shall be solidly connected to the earthing system. Lightning protection is provided for building and structures whose risk index is more than 10^-5

6.6 The main earthing network shall be used for earthing of equipment to protect against static electricity.



- All medium and high voltage equipment (above 250V) shall be earthed by two separate from the electrical earthing system.
- **6.8** Plant instrument system clean earthing shall be separate from the electrical earthing system.
- 6.9 All paint, scale and enamel shall be removed from the contact surface before the earthing connections are made.
- 6.10 All earthing connections for equipment earthing shall be preferably from the earth plate mounted above ground wherever provided.
- **6.11** Earth connections shall be made through compression type cable lugs/by welded lugs/bolted connection as indicated in drawing.
- 6.12 All hardware used for earthing installation shall be hot dip galvanized or zinc passivated. Spring washers shall be used for all earthing connections and all connections adequately locked against loosening.
- **6.13** Lighting fixtures and receptacles shall be earthed through the extra core provided in the lighting circuit/cable for this purpose.
- **6.14** The reinforcements of electrical building and the electrical building floor shall be connected to main earth grid.
- 6.15 In electrical room an earth grid shall be formed using GI flat to which each equipment earth strips will be connected. The GI flat shall be taken out of the room and connected to the raisers provided. These raisers shall be taken out from the below ground buried main earth grid formed by means of connecting all earth pits

7.0 TESTING AND COMMISSIONING

- **7.1** Earthing systems/connections shall be tested as follows:
- **7.2** Resistance of individual earth electrodes shall be measured after disconnection it from the grid by using standard earth test meggar.
- **7.3** Earthing resistance of the grid shall be measured after connecting all the earth electrodes to the grid. The resistance value of an earth grid to the general mass of earth shall be as follows:
 - Earthing resistance of the grid shall be measured after connecting all the electrodes to the grid.
 The resistance between any point on the metallic earth grid



and the general mass of earth shall not exceed 1 ohm.

- For lightning protection, the value of 5 ohms as earth resistance shall be desirable, but in no case it shall be more than 10 ohms.
- 7.4 The resistance to earth shall be measured typically at the following points:
 - a) At each electrical system earth or system neutralearth.
 - b) At each earth provided for structure lightning protections.
 - c) At one point on earthing system used to earth electrical equipment enclosures.
 - At one point on earthing system used to earth wiring system, enclosures, such as metal conduits and cable sheaths or Armour.
 - e) At one point on fence enclosing electrical equipment.
- 7.5 All earthing layout drawings shall be marked by contractor for 'AS BUILT STATUS' and two sets of copies shall be submitted to EIC/Owner.

8.0 TEST PROCEDURE

The Contractor shall fill up the Test Report after the completion of the tests and shall submit it to the EIC/Owner duly signed for his approval and acceptance.

INSTALLATION TESTING REPORT - EARTHING INSTALLATION

- 1.0 Earthing System Data
- 1.1 Type of Electrodes
- 1.2 Total number of electrodes
- 1.3 Main earth grid size
- 1.4 Material
- 2.0 General Checks (Tick if it is in order Otherwise give details)
- 2.1 Construction of earth pits and Installation of ground electrodes as per layout drawing
- 2.2 Size of earth conduct for various Equipment as per layout drawing
- 2.3 Minimum distance kept between Two electrodes
- 2.4 Welding at the joints are properly made:



- 3.0 Tests
- 3.1 Measured earth resistance of each electrode in Ohms
- 3.2 Measurement of earth grid resistance (with all electrode connected to grid):
 - a) At each electrical system or System neutral earth
 - b) At one point on each earthing system used to earth electrical Equipment enclosure.

9. EQUIPMENT EARTHING CONDUCTOR SIZES

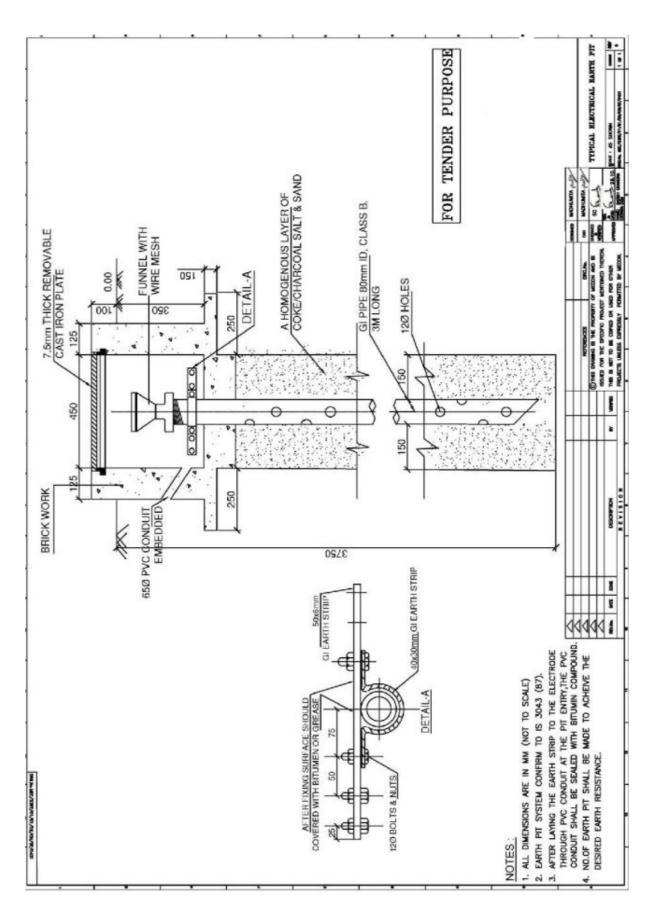
Required sizes for earthing conductors shall have to be established by design calculations. An earthing schedule giving the type/ sizes of earthing conductors for different equipments is given below. The sizes given below are indicative and minimum only.

TYPE OF EQIPMENT	CONDUCTOR SIZE
Main buried/above ground Earth grid	50mm × 6mm GI Strip
Transformer	50mm × 6mm GI Strip
LV switchboard	50mm × 6mm GI Strip
Distribution boards, UPS, Battery rack	25mm × 3mm GI Strip
Motors up to 3.7 kW	25mm × 3mm GI Strip
Motors above 3.7 kW to 110 kW	25mm × 3mm GI Strip
Motors above 110 kW	40mm × 5mm GI Strip
Tanks, vessels, Columns, Heat Exchangers & other major	40mm × 5mm GI Strip
process equipment	
Push button stations	25mm × 3mm GI Strip
Street light poles	25mm × 3mm GI Strip
Lighting transformer	25mm × 3mm GI Strip
Bonding of pipe	25mm × 3mm GI Strip
Bonding between cable trays	25mm × 3mm GI Strip
Lighting fixtures, sockets	25mm × 3mm GI Strip
Compressor skid	40mm × 5mm GI Strip
Cascade/ Dispenser	25mm × 3mm GI Strip

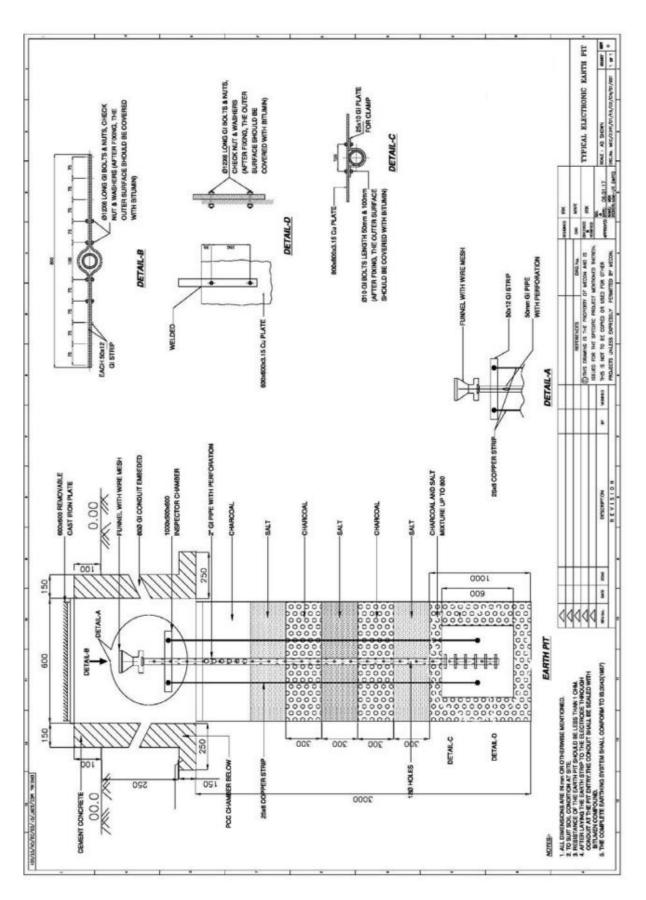
NOTE: -

1. Green color sleeving (about 50mm length) shall be provided at both ends to denote earthing.













SOCKETS, SWITCHES, FANS AND OTHER INSTALLTION ACCESSORIES:

A. SOCKET OUTLETS:

i. FLUSH/SURFACE MOUNTING SOCKET OUTLETS (DECORATIVE TYPE) 6A / 16A, 6A, 240V, single phase, 3 pin (two pole and one earth) socket outlet shall be flush / surface mounting type along with decorative type switch. The socket shall be 6A / 16A combined (universal type) having 6 pin, or 16A, 3 pin with suitable piano type switch.

ii. INDUSTRIAL TYPE PLUG SOCKET OUTLET

10A/20A, 240V, single phase, 3 pin (two pole and one earth) industrial type socket outlet with interlocked switch. The outer casing shall be made of non-corroding die cast aluminium alloy, moulded of superior grade phenolic /polyester compound.

B. JUNCTION AND OUTLET BOXES:

Junction and outlet boxes fabricated with sheet steel shall have a minimum thick-ness of 1.6 mm / polycarbonate unless otherwise specified in schedule of items. All these items shall be painted whether indicated specifically in the BOQ or not. The JB shall have earthing terminals & terminal block, required no. of knockouts for cable entry etc.,

The exact size and number of knockouts & cable glands shall be decided by the Contractor as per actual requirement.

C. CONTROL SWITCHES:

i. **DECORATIVE TYPE**

Single pole decorative type, 6A or 16A switches shall be used for light point wiring in control rooms, office premises/non plant buildings.

All branch switches shall be placed in line conductor of the circuit and no single switch or fuse shall be inserted in the neutral conductor of the circuit.

switch board shall be made of 1.6 mm thick sheet steel and painted / polycarbonate including supports for switches, sockets, fan regulator etc., but excluding ront cover in case of decorative switches & sockets which will be of FRP sheet of approved quality, design and colour. Clear depth of the box shall not be less than 60 mm, but adequate for easy mounting of fan regulators. All fittings shall be in flush pattern in case of concealed wiring. The FRP cover sheet thickness shall not be less than 4 mm. No separate payment will be made for switch boards as the cost of this has to be included along with the rate quoted for socket, point wiring, switches and fans. In case of more numbers of sockets / switches / regulators are to

mounted in one location, these can be mounted in a bigger size switch board with necessary clearance etc., between switches instead of individual switch board for each switch. Sheet steel enclosure shall be painted with two coats of epoxy paint above two coats of epoxy based primer.

iii. BOLTS & NUTS / BRACKETS / DOWNRODS / CHAIN:

All screws, bolts, nuts and washers used for Illumination work shall be of brass or cadmium passivated MS to resist corrosions. All brackets, down rods, chains used for suspension of light fittings shall be made of MS Conduits / channels / angles / strips as approved by site engineer.



Two coats of epoxy spray painting shall be applied over two coat of epoxy based primer for all accessories.

iv. CEILING ROSES / LAMP HOLDERS FOR POINT WIRING:

- a. Ceiling rose may be used in the wiring, as required.
- b. Normally only one flexible cord shall be attached to a ceiling rose. Specially designed ceiling roses shall be used for multiple pen-dants.
- c. All ceiling roses shall be of three plate pattern.
- d. All lamp holders shall be of brass and batten or angle type as re-quired with shrouding.

v. CEILING FAN FANS AND REGULATORS:

- a. All ceiling fans supplied shall be conforming to relevant IS and with capacitor starting, 5 star rated suitable for voltage range of not less than 220 V to 240 V AC single phase supply.
- b. Fans shall be supplied complete with fan motor, fan blade, insulated hangers canopy and regulator along-with a down rod of suitable length as required. The speed regulators shall be of electronic type for steeples variation from zero to 100%. All ceiling fans supplied shall have double ball bearings.
- c. All ceiling fans shall be wired to a junction box and suspended from a hook in shackle and insulated from the same. All joints in the suspended rod shall be screwed and all joints or bolts in connection there with shall in addition be secured by means of split pin.
- d. The canopy at the top of the suspension rod shall effectively hide the suspension.
- e. The lead-in wires shall not be smaller than 0.75 Sq.mm (24/0.2 mm) PVC insulated flexible copper conductor cable and shall be protected from abrasion.
- f. Unless otherwise stated, all ceiling fans shall be hung at 150mm above the light fitting level or as directed by the Engineer in- charge. The length of the down rod supplied shall be suitable for this purpose.
- g. Generally the ceiling fans shall be mounted 2500/3000, above FFL. The down rod length shall be considered based on roof profile (slope or flat).

vi. EXHAUST FAN:

Exhaust fan shall have totally enclosed with highly efficient heavy duty motor mounted on ball bearing, precisely and dynamically balanced blades/impeller to ensure smooth and trouble free operation, rigid frame with rubber pads for silent operation finished with epoxy based painting for better chemical, Mechanical and corrosion resistant. The exhaust fan shall be supplied with wire guard/bird mesh screen as required.

The exhaust fan shall be provided with earthing terminal. Battery rooms shall be provided with minimum two exhaust fans. All toilet blocks / Pan-try shall be provided with Exhaust fans.

WIRES:

POINT WIRING:

Supply and wiring of 1100V grade, FRLS, PVC insulated single core Copper conductor wire (without joint) drawn into the 19 mm dia concealed PVC Conduit for Light points and 25mm dia. PVC conduit for power points (including supply of conduit). The scope covers pulling the wire from switch box to lighting / ex-haust fan point through the conduit and connecting both the ends with all accessories like bends, junction boxes and couplers, factory made covers for all the pull JBs, including breaking of wall etc.



The wiring for lighting, fans and socket outlets shall be carried out on point wiring basis. Point wiring shall be done in conduits using 3 runs of single core 1100V grade, FRLS, PVC insulated stranded copper wire as per IS:694 as specified in BOM.

The 6A sockets shall be of universal type. The sockets shall be flush mounting type. Every switchbox shall consist of 6A socket outlet controlled by a 6A switch.

The switchbox shall be suitable for concealed flush mounting in walls. Necessary chipping of walls for installing the switchbox and making the wall good after installation of the switch box shall be included in the scope. The switchbox shall be made from galvanized sheet steel and shall have a provision for earthing from in-side. The boards shall be covered with poly carbonate front cover having good aesthetic look suitable for mounting modular switches and sockets.

Point wiring shall include supply and installation of 1.5 sq.mm, 2.5 sq.mm, 4 sq.mm & 6 sq.mm Cu wires, 19mm rigid PVC conduits and wiring accessories like pull box, ceiling roses, fittings including circular/rectangular sheet steel/thermoplastic bends, tees, sockets, adopters, reducers, saddles, distance pieces etc for concealed wiring as per requirements to complete the lighting/fan/exhaust fan wiring of rooms. PVC insulated multi stranded copper wires of 1.1 KV grade with ISI certification shall be used. The following colour code shall be adopted for wiring: Phase: Red/Yellow/Blue Single phase wiring: Black Neutral: Green

Primary point is the light/fan point wiring from the switch box to one light fitting / fan via the switch. Secondary points are light points looped from the primary light point or from the nearest secondary light point in the same lighting circuit.

All electronic ballasts for light fittings shall be low loss type with total harmonic distortion not more than 30% and power factor greater than 0.9.

CONDUITS:

i. PVC CONDUIT

Rigid heavy duty PVC conduit as per IS: suitable for electrical wiring may also be used wherever indicated in the approved drawings or specifically approved by Engineer. It shall be of approved make.

ii. PVC CASING, CAPPING & ACCESSORIES

PVC casing, capping & accessories like Tees, elbows, JB's shall be of heavy duty fire retardant self-extinguishing, Acid & Alkali resistant, PVC toughness that will not dent, snap-fit covering, desired colour.



Technical Specifications for AC Distribution Board:

A. General:-		
1.0	Туре	- Metal clad
		- Shall be suitable for 240V, phase and neutral.
2.0	Construction	- Totally enclosed.
		- Dust & vermin proof.
3.0	Type of execution	Single front.
4.0	Mounting	Wall mounting.
5.0	Installation	Indoor / Outdoor (with canopy).
B. Constructional Features :-		
1.0	Cable entry	- Incomer: - Bottom cable entry.
		- Outgoing :- Top / Bottom cable entry.
2.0	Design	One Incomer and outgoings.All the components shall be accessible from front
3.0	Cable entry	- Incomer: - Bottom cable entry.
		- Outgoing :- Top / Bottom cable entry.
4.0	Earthing	Two separate earthing terminals shall be provided.

Technical Specifications for Miniature Circuit Breakers (MCB)

1.0	Туре	Heat resistant plastic moulded type,
2.0	Number of Poles	Double Pole (DP)
3.0	Ref. Standard	IS: 8828 –1978
4.0	Protections	MCBs shall be provided with quick break trip-free mechanism and direct acting thermal overload and short circuit trip elements.
5.0	Short circuit capacity	Not less than 9kA at 0.8pf



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6.0	Mounting	DIN Channel mounting.
		Single phase MCBs mounted adjacent to each other and connected to different phases shall be provided with adequate insulated phase barriers.
7	Current Rating	The MCBs shall be selected from standard current ratings. (As per SOR)
		MCB characteristics curve shall be as per application.

Technical Specifications for 7/18 (6 Sq.mm), Two Core, PVC Insulated Aluminium Conductor Sheathed Weather Proof Service Wire WPTC

Number of Cores : 2 Cores

Size : 7/18 (6 Sq.mm)

Insulation Material : PVC Conductor Type : Stranded Sheath : PVC

Voltage : 1.1 kV Conductor : Aluminium

Technical Specifications for PVC Coated GI Wire, 4mm

Wire Material : GI

Finish : PVC Coating

Diameter : 4mm

Technical Specifications for 32A, 230V, Porcelain Fuse Set

AC Current : 32 Amps

Voltage : 230 Volts

Material : Porcelain

Technical Specifications for 32A Neutral Link

Current Rating : 32A

Voltage Rating : 500 VAC

Insulator Material : PBT

Connector : Brass with Nickel over it.

Technical Specifications for Wooden Board for mounting of Energy Meter and Fuse carrier

Dimensions : 18 inch x 24 inch

Material : Wood



Technical Specifications of Electric Shock hazard charts shall comply IS: SP 31 (1986)

Technical Specifications of Cable route markers, Cast Iron Disc type

Disc – Round: Dia - 100mm.

Thickness: 3 mm.

Support Angle: 25x3, Length: 3ft.
Painting: Standard - Aluminum.



PREFERRED MAKE LIST

S.No.	ITEM DESCRIPTION	PREFERRED MAKES
1	LT Power Cable (FRLS)	Universal/Polycab/KEI/KEC/Special CABLES
2	Flame proof light fixtures	Baliga/ Sudhir Switchgears Pvt. Ltd./ Flexpro Electricals Pvt. Ltd./ FCG./ Bajaj Electricals Ltd./ Crompton Greaves Ltd.
3	Non Flame proof Light Fixtures	Bajaj/Crompton/Wipro/Philips/Osram/Sigma
4	FLP Cable glands	Baliga/ Flexpro/ Flameproof/ FCG/Dowells
5	Cable - Lugs	Dowells/ Jainson
6	Cable tray	Advance power product/Ercon Composite /India Electricals Syndicate/Mahavir Enggineering
7	Ceiling/Exhaust Fans	Khaitan Electricals Ltd./ Havell's/ Crompton Greaves Limited/Bajaj Electricals/USHA
8	Earthing Materials	Rukmani Electrical & Components Pvt Ltd./ Indiana Grating Pvt Ltd./Any reputed make with ISI certification
9	Flame proof LDB's/ JB,s/Control Station/ switches	FCG/Flame proof/Flexpro Electricals/Sudhir/ Baliga Lighting Equipments Pvt. Ltd.
10	Miniature Circuit Breakers (MCBs) and Lighting DB	Siemens/L&T/Schneider/Indoasian/Havells/MDS(Legrand)/ABB/HPL India
11	Selector switches	ABB/BCH/Kaycee/Siemens/Teknik/L&T /Control & Switchgear/Vaishno/Salzer/Siemens
12	Switches - 5/15A Piano/ Plate, Switch Socket	Anchor/MDS Legrand/Precision/Cona
13	Switch Socket Outlet	Anchor/BCH/Essen/Best & Crompton



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14	Push Buttons	Salzer/BCH/L&T/Essen/Technic/Vaishno/ABB/Control & Switchgear
15	Switch Socket Outlets (Industrial)	Essen Engineering Company Pvt. Ltd./ Crompton Greaves Ltd./ BCH
16	GI Pipes	Tata Pipe/Jindal/GSI/Indus Tube/Swatik/Zenith
17	PVC pipes	Finolex/Premier/Sudhakar/Kissan/Supreme
18	Safety Items – Shock treatment chart etc	Reputed make with ISI certification
19	Terminal Blocks	Phoenix Contact/ Connect Well/Lapp/ S&S/ Wago /Elmex
20	Timer & Time delay relays	ABB/BCH/L&T/Siemens / Essen/Telemechanique/Omron
21	ELCB/RCCB	ABB/Siemens/Schneider/MDS (Legrand)/L&T/Indoasian/HPL India





TECHNICAL SPECIFICTIONS



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LIST OF SPECIFICATION/STANDARDS

PART-I : Civil, Structural and Architectural Work

PART-II : Electrical and illumination Work



PART-I

TECHNICAL SPECIFICATION FOR CIVIL, STRUCTURAL AND ARCHITECTURAL WORK





1. CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS

1.1. GENERAL

The scope of work to be performed under this contract shall include complete civil, architectural and steel structural works as per plans, equipment layout, drawings & technical specifications for the CGS facility at Bhimadole.

2. SCOPE OF SUPPLY

Contractor shall procure & supply to site all the materials including cement, reinforcing steel, steel sections, plates, pipes, MS Y Angle Posts, Concertina coil, RBT fencing wire, Chain link fencing, chequered plate, Colour coated steel sheets, False ceiling, mesh and other accessories, other masonry materials, bitumen/asphalt, admixtures & bonding agents, sealants, kerb stones, paver block, sand, boulder, etc., and any other construction material / item required to complete the civil & structural works.

All costs towards testing/inspection of materials/goods shall be borne by the Contractor.

3. SITE WORK

Complete construction work including supply of labour, construction materials, construction equipment, survey, tools & tackles, dismantling & modification / strengthening, supervision, testing etc. required to complete all the structures, foundations, roads, drains, pavements, finishes, supply, fabrication, erection of steel structures, welded wire mesh fencing and gates etc, painting, including site grading/earthwork in cutting & filling etc. as specified and required to complete the civil & road works in all respect.

All enabling works e.g. construction water tank, casting/fabrication yard, electricity, site stores & office, safety and security measures, coordination with other contractors working at site etc. shall be Contractor's responsibility.

3.1. SCOPE OF WORK

The scope of work shall be broadly, but not limited to, the following:

- a. Site grading of the plot by removing 150 mm top soil stacking it properly and reusing it for planting purpose, including plot development by filling good quality earth as required.
- b. Earth filling in embankments for external roads wherever required with providing of RCC Culverts/ Pipe Culvert.
- c. Clearing the site, removal of bushes and trees etc as per site requirement.
- d. Construction of a 3 m high pre cast boundary wall, MS Y Angle Posts and



- Concertina coil with RBT fencing etc as per drawing.
- e. RCC cable trenches: complete civil works for cable trench including providing inserts, conduits (GI, PVC or HDPE etc.) and PVC coated MS Chequred cover plate / Pre cast concrete covers as per requirement.
- f. Construction of compressor foundation as per drawing.
- g. Construction of Green belt etc as per drawing.
- h. Construction of fore court, approach roads etc. as per drawing.
- i. Construction of cable pit, drain pits etc as per requirement.
- j. Construction of Septic Tank along with Soak Pit and connections.
- k. Storm water drainage system in RCC/brick drains with complete civil works as per requirement.
- I. Laying of Hume pipes for drainage as per drawing and requirement of site.
- m. Construction of Utility/Office building Control room, Office room, Store Room, UPS and Battery Room, Electrical Room etc as per relevant architectural drawings.
- n. Construction of Bore well as per supplier specification and direction of Engineer in charge.
- o. Grouting of all base plates/frames of equipment foundations and structural bases.
- p. Providing of all inserts, conduits, pre-cast covers, fixing of free issue items into permanent works etc.
- q. Providing of approved quality sand for back filling as per requirement.
- r. Clearing all construction debris and handing over completed work site.
- s. Any other work not specifically mentioned but required to make the station functional.
- t. Making as-built details/drawings on one set of construction drawings and return to owner.

4. PREAMBLE TO SCHEDULE OF RATES

The Preamble to Schedule of Items is an integral part of the schedule of quantities and rates and this is to be considered incorporated into the description of items themselves. The Contractor's rate for any item of work in the schedule of item shall, unless stated otherwise be held to include the cost of all materials including wastage, conveyance and delivery, unloading, storing, fabrication, all consumable materials, like MS bolts, washer, electrodes, putty, gases, splices paints, tools and plants, power fuel, consumables, all taxes, royalties, other revenue expenses, temporary facilities like roads etc.

The item shall include all the safety provisions listed below:

• The site should be cordoned off on all sides by way of 3 Mt. High



corrugated GI sheet fixed on metal pipes/angles, leaving space for only a Gate. This fencing should be fixed such that it is not possible for anyone to enter the site from any other location other than the Gate.

- The gate should be made in metal with metal sheet cladding. A guard restricting entry of all unauthorized person/material on site should man the gate. The guard shall also maintain a register of all persons visiting site.
- All persons including all labor, supervisors, visitors etc. on site must wear hand gloves, helmet and safety shoes. The responsibility of this shall rest with the main contractor.
- All workmen while working on height shall wear safety helmets.
- All workmen such as welders/ fitters etc. shall wear protective gloves, protective glasses etc. and as per the requirement and demands of the trade.
- All excavated pits/holes shall be cordoned off with red tape with warning notice.
- All inflammable material shall be kept in non-inflammable containers that are fixed with screwed on caps at all times. The containers should be marked with danger sign and the name of the material shall be marked on the outside. There should be at least one person who should be responsible for the safe custody of these materials.
- All areas of work shall have appropriate safety signage depending on the nature of work, prominently displayed to prevent any mishap, particularly signs in fluorescent paint for night vision. These signs should be visible from a reasonable distance for a vehicular traffic at designated speed limits for a given road/ location. All necessary city traffic rules and signage specifications shall be observed with strict adherence.
- All gadgets must have required safety devices in working conditions as per the manufacturers' recommendations and the law of the country.
- All the persons on site must be insured against injury and death due to accidents.
- The contractor shall not use the site for any activity other than what it is authorized for.



- Children below the age of 16 shall not be allowed to work on site. The
 contractor shall prepare a secured crèche adjacent to the site, for the
 children of labor working on site and there shall be at least one person
 dedicated to look after the safety and other needs of these children at
 all time.
- All persons working at site shall be physically and mentally fit. The
 contractor shall ensure that no illegal activity takes place on site and
 that no person with doubtful past shall be engaged on site.
- The contractor shall be responsible for the safety of all persons at site.
- Consumption of liquor and smoking shall not be permitted on the site.
- The site shall be illuminated at night when there is work in progress.
- The contractor shall maintain a First-aid box at site to take care of any minor injury.
- The storing of all inflammable/explosive material shall be done as per the laws of the country and best common practice.
- All temporary electrical connections shall be done with the help of insulated connectors to prevent any sparking etc.
- Contractor shall keep the Owner and Consultant completely indemnified by ensuring a completely safe working, keeping a third party insurance cover on site.

4.1. SITE CLEARANCE

Complete works for the site clearing so that the site is suitable for construction activity. Brief description of major items shall be as follows:

- a. Dismantling of all existing structures in brick masonry/stone masonry/ RCC /PCC, road, fence, sheds, cladding, sheets etc. so that the site becomes suitable for construction activity.
- b. Disposal of all material to be cleared from the site to any authorised disposal site/ storage yard.
- c. Removal of trees up to and above 30cm girth as per respective SOR items.



d. Provide all assistance/co-ordination/liaison between any and all government/ semi government agencies connected with the scope mentioned and also with the body owning/maintaining the access road to the site.

Note:

- 1. Site Clearance including removal of vegetation shall be measured in m².
- 2. Demolition of RCC/PCC/Brick Masonry and road will be paid in M³.
- 3. Trees shall be counted in <u>numbers</u> for more than 30 cm girth.

4.2. EARTHWORK IN SITE GRADING, EXCAVATION & BACKFILLING FOR PLOT DEVELOPMENT, ETC.

Brief description of major items shall be as follows:

- a. Taking pre-work and finished levels.
- b. Stripping and grubbing the top soil of 150 mm and preparation of sub-grade.
- c. Excavating excess soil and soft rock if any to develop the plot.
- d. Dewatering of excessive water.
- e. Backfilling with serviceable earth in layers of 150 mm thickness in controlled way.
- f. Watering and compaction up to '95% or as per direction of Engineer in charge of its MDD with PM Chanical means.
- g. Disposal of unserviceable and surplus earth/rock to a suitable dumping ground to any lead.
- h. Actual work shall be carried out as per certified construction drawings to be issued to successful tenderer.

Note:

- i. For all these items only net excavated quantity in CuM shall be measured for payment.
- ii. No separate payment for excavation for foundation / sewerage forecourt or Road work/other items where earthwork is included (since cost of earthwork is included in respective items).
- *iii.* Measurement for rock breaking shall be done by stacking. 35% of stack measurement shall be deducted as voids.

Earthwork shall be done as per approved detailed construction drawings to be issued to the successful tenderer. Offer to be prepared by the tenderer based on the enclosed drawings and on lump sum unit rate (per M³).

4.3. EARTH WORK IN FILLING

Complete earthwork in filling with borrowed earth is included in the scope. Brief description of major items shall be as follows:



- a. Taking pre-work and finished levels.
- b. De-watering of excessive water.
- c. Strutting and shoring to retain the earth.
- d. Borrowing of approved quality good earth from any lead.
- e. Filling in layers of 150 mm.
- f. Watering and compaction up to '95% or as per direction of Engineer in charge' of its MDD with Mechanical means.

Note:

Payment for item earthwork in filling shall be paid for compacted net volume of filling after deductions of foundations, culverts, etc

4.4. SAND FILLING AND STONE SOLING

Complete works in filling is included in the scope. Brief description of major items shall be as follows:

- a. Taking pre-work and finished levels
- b. Borrowing of approved quality sand/stone from any lead.
- c. Filling in layers of 150 mm.
- d. Providing and laying stone ballast 40-63 mm size in layers of 150 mm with spreading blinding material like murum, bajri, stone grit and compaction with road roller etc. complete the surface as per specifications including cost of material.
- e. Watering and compaction by 10 T rollers.

Note:

i. Payments to be done on completed work profiles by considering the plan dimensions only. Sand filling and Stone soling shall be done as per approved detailed construction drawings to be issued to the successful tenderer. Offer to be prepared by the tenderer based on the enclosed drawings and on lump sum unit rate (per M³).

4.5. PCC WORK

Providing and laying PCC M 7.5 (1:4:8) / M 10 (1:3:6) / M15 (1:2:4) in all positions, in foundations, substructure, superstructure and under floor, etc. (at locations where the same is not included in respective SOR items, eg RCC in Substructure, Brick work, Concrete pavement etc.) complete in all respects as per scope of work, detailed construction drawings, technical specifications and direction of Engineer-in-charge.



Following works shall be inclusive in the rate of PCC item:

- a. Earth Work in excavation including back filling (including disposal of surplus earth).
- b. Preparation of bed including cleaning, levelling, compacting/tamping of surface and providing support from bottom and sides.
- c. Providing shuttering and strutting of all types (If necessary).
- d. Providing inserts, pockets, recesses, holdfast etc.
- e. Curing, rendering, finishes to match with adjoining surfaces etc.

Note:

i. For all these items only net PCC concrete quantity in M³ shall be measured for payment. PCC below brick work and RCC works is included in the respective item.

The construction of PCC work shall be done as per approved detailed construction drawings to be issued to the successful tenderer. Offer to be prepared by the tenderer based on the enclosed typical drawings and on lump sum unit rate (per M³) of PCC work done.

4.6. REINFORCED CEMENT CONCRETE - SUB STRUCTURE

Brief description of major items shall be as follows:

- a. Earth Work in excavation including back filling using serviceable surplus/borrow material, disposal of surplus earth (wherever required), including bailing out water (where ever required), shoring / strutting etc.
- b. 100 mm thk. PCC M-10 in mud mat.
- c. Providing shuttering and strutting of all types.
- d. RCC M25 as per drg. & specification including supply of cement, coarse aggregate, fine aggregate and placement of concrete at all levels and depths, all inclusive & testing of concrete and other materials.
- e. Providing and fixing of all anchor bolt and nuts into permanent works etc.
- f. Providing and fixing of all inserts, conduits, precast covers into permanent works etc.
- g. Provision of chequered plates, gratings into permanent works as per SOR item of Structural works.
- h. Grouting of all base plates/frames of equipment foundations as per requirement.
- i. Application of two coats of hot bitumen on surfaces in contact with soil.

Note:

- i. For all these items only net RCC quantity in M³ shall be measured for payment.
- ii. Earth work with borrowed earth shall be paid vide respective SOR item.



- iii. Anchor bolts and nuts shall be paid vide respective SOR item.
- iv. Grouting with non shrinkable compound shall be paid vide respective SOR item

4.7. REINFORCED CEMENT CONCRETE - SUPER STRUCTURE

Brief description of major items shall be as follows:

- a. Providing shuttering and strutting of all types
- b. RCC M25 as per drg. & specification including supply of cement, coarse aggregate, fine aggregate and placement of concrete at all levels, all inclusive & testing of concrete and other materials.
- c. Grouting of all base plates/frames of equipment foundations and structural bases as per requirement.
- d. Providing and fixing of all anchor bolt and nuts into permanent works etc.
- e. Providing and fixing of all inserts, conduits, precast covers into permanent works etc.
- f. Provision of chequered plates, gratings into permanent works as per SOR item of Structural works.

Note:

- i. For all these items only net RCC quantity in M³ shall be measured forpayment. The RCC quantity of building superstructure is included in the Building Works item.
- ii. Anchor bolts and nuts shall be paid vide respective SOR item.
- iii. Grouting with non shrinkable compound shall be paid vide respective SOR item.

4.8. REINFORCEMENT STEEL

- a. Supplying, fabricating and fixing in position HYSD steel reinforcements / TMT grade Fe-415/Fe- 500 confirming to IS 1786-1985 at all levels and positions.
- b. Straightening, cutting, bending, cranking, binding, welding, provision of necessary chairs and spacers for reinforcement bars as per drawing and construction requirements.
- c. Preparation of bar bending schedule drawings and getting the same approved by site engineers as directed by EIC.

Note:

- i. Rate to include cost of all labour, tools, tackles, equipment, hire charges, supply of all materials such as steel reinforcement, binding wire and other minor construction materials, testing etc. all bye works and sundry works complete in all respects.
- ii. Chairs, laps, spacers, wastage etc. shall be to contractor's account.
- iii. Only net reinforcement bars as per approved BBS / as laid at site shall be



considered for payment.

4.9. BRICK WORK IN SUB STRUCTURE / CC BLOCKS (200mm thick)

Complete works in brick masonry sub structure is included in the scope. Brief description of major civil items shall be as follows:

- a. Earthwork in excavation including back filling using serviceable surplus material or approved borrow material and transportation of excess earth beyond plot limits. Preparation of sub-base including de-watering and compaction.
- b. CC block work for sub structure and super structure with not less than M7.5 grade, minimum compressive strength 75 kg/sqcm in 1:4 cement sand mortor (in coarse sand.)
- c. Brick work for SS tubing trench with not less than M-5 grade bricks/ minimum comp. Strength of 50 kg/cm² in 1:6 cement sand mortar (in coarse sand).
- d. 150 mm thk. PCC (M-10) in levelling course.
- e. DPC 50 mm with cement concrete M-15 (1:2:4) as per requirement with water proofing compound and application of bituminous paint
- f. 15 mm thk. plastering in CM (1:4) (in coarse sand) on exposed brick surfaces.
- g. Application of two coats of hot bitumen on surfaces in contact with soil.
- h. Applying Lime wash / Cement based paint / Weather proof paint on plastered faces in sub structure as specified in drawings.
- i. Making weep holes of 150 mm x 150 mm with stone filter pack at 1.0 m intervals in both the directions.

Note:

- Only net brick masonry quantity excluding plaster thickness shall be measured in M³ for payment purpose.
- ii. Earth work in backfilling with borrowed earth shall be paid vide respective SOR item.

The construction of brick work shall be done as per detailed construction drawings to be issued to the successful tenderer. Offer to be prepared by the tenderer based on work described above.

4.10. BRICK WORK IN SUPER STRUCTURE /CC BLOCKS

Complete works in brick masonry super structure is included in the scope. Brief description of major civil items shall be as follows:

a. CC block work for sub structure and superstructure with not less than M7.5 grade, minimum compressive strength 75 kg/scm in 1:4 cement sand mortar (in coarse sand).



- b. Brick work for ss tubing trench with not less than M-5 grade bricks/minimum comp. strength of 50 kg/scm in 1:6 cement sand mortar (in coarse sand).
- c. 15 mm thk plastering in CM (1:4) (in course sand) on exposed brick surfaces.
- d. All niches, offsets, pockets etc shall be considered part of the work.
- e. Providing shuttering / supports etc. as per requirement.
- f. Applying Lime wash / Cement based paint / Weather proof paint / oil bound distemper /Acrylic paint on plastered faces in super structure as specified in drawings.

Note:

i. Only net brick masonry quantity excluding plaster thickness shall be measured for payment purpose.

The construction of brick work shall be done as per detailed construction drawings to be issued to the successful tenderer. Offer to be prepared by the tenderer based on work described above and payment will be made on rate (per M³) of brickwork done.

4.11. BRICK MASONRY/CC BLOCKS (200mm thick) IN SUPER STRUCTURE

Complete works of brick masonry wall in superstructure including RCC, PCC, DPC, coping with MS Y Angle Posts and Concertina coil with RBT fencing etc as per drawing. Brief description of major civil items shall be as follows:

- a. CC block work for sub structure and superstructure with not less than M7.5 grads, minimum compressive strength 75 kg/scm in 1:4 cement sand mortar (in coarse sand).
- b. RCC M-25 Including steel reinforcement for coping.
- c. Drip course 25 mm wide over coping.
- d. 15 mm thk plastering in CM (1:4) (in coarse sand) on exposed brick surfaces.
- e. Painting of exposed wall surface with three coats of Acrylic emulsion paint as approved by Engineer-in-charge.
- f. Expansion joints shall be provided as per drawing.
- g. Approx 600 mm High MS Y Angle Posts including painting as per specification with 9 straight lengths of RBT fence with 2.6 mm dia spring core wire and short barbs of 11 mm width and circular Concertina coil of 600 mm dia with 50 turns per coil expandable between 6-8m and approx. weight of 8 Kg per coil.

Note:

Only net Boundary wall length including Pillars shall be measured in 'M' for payment purpose.

The construction of masonry boundary wall shall be done as per detailed construction drawings to be issued to the successful tenderer.

4.12. SOAK PIT AND SEPTIC TANK

Complete works for the making and proper functioning of soak pit and septic tank is included in the scope:



Brief description of major items shall be as follows:

- a. Earth work in excavation, back filling, and disposal of surplus earth. b. P.C.C. M-15 (1:2:4).
- c. Brick work of M-5 grade in 1:5 cement mortar.
- d. Plaster 12 mm thick 1:3 in coarse sand, finished with floating coat of neat cement inside and rough plaster outside.
- e. Brick bat filling in soak pit.
- f. Honey comb brick work in soak pit.
- g. RCC M-25 including reinforcement, shuttering etc in top slab.
- h. Making all types of connections for sewerage collection and disposal.
- i. Providing and fixing cast iron vent pipe up to required height as per drawing.

Note:

Soak pit and septic tank shall be provided inclusive of all related works, as per approved detailed drawings to be issued to the successful tenderer. Offer to be prepared by the tenderer based on the enclosed drawings and on lump sum unit rate (per installation).

4.13. BUILDING WORKS

Complete civil and architectural works for the buildings is included in the scope:

<u>Utility/Office building - Control room, Office room, Store Room, UPS and Battery Room, Electrical Room etc</u>

Brief description of major civil and architectural under the item is as follows:

- i. Site grading of the plot by removing 150 mm top soil stacking it properly and reusing it for planting purpose, including plot development by filling good quality earth as required in the new areas to be developed.
- ii. The building shall be RCC framed structure with cladding and partitions of masonry walls.
- iii. Construction of all sub-structures and superstructures.
- iv. Anti-termite treatment to be applied to the building foundations, plinth and under flooring inside the building and under Apron.
- v. DPC 40 mm with cement concrete 1:2:4 as per requirement with water proofing compound of CICO/ PIDILITE/ SIKA and application of bituminous paint.
- vi. All underground concrete/ masonry structure in contact with earth shall be given two coats of hot bitumen application.
- vii. All structural concrete for RCC elements shall have a minimum strength of 25 MPa at 28 days. Grade of concrete in R.C.C. works shall be M-25.
- viii. Masonry shall be in cement mortar 1:4 (in coarse sand) and with CC blocks of



strength not less than 7.5 MPa.

- ix. Plastering on masonry structures shall be of thickness 15 mm on either faces, and 6 mm on concrete faces. The cement mortar shall not be leaner than 1:4 in coarse sand.
- x. All chhajja/ canopy projections shall have drip mould grooves underneath all along periphery.
- xi. Entrance door/door for office/officer, control room of the building shall be anodized aluminium

 /powder coated of approved shade fully / partially glazed, 6 mm thick float glass(ASAHI/MODI/TUFE) pages fixed with necessary gaskets and aluminium.
 - glass(ASAHI/MODI/TUFF) panes fixed with necessary gaskets and aluminium beading strip or panelled (double sided) with pre laminated board, double leaf / single leaf doors with floor springs. All windows/ ventilators shall be aluminum glazed min. 6mm thick glass (ASAHI/MODI/TUFF) with anodized aluminum/powder coated hardware with aluminum grill. The windows / ventilators shall be partially/fully fixed or openable, casement or sliding windows as per requirement and drawing. The fixtures like handles, stoppers, stays, etc., shall also be anodized aluminium/powder coated and shall be of approved make. All aluminium sections shall be of standard make like Jindal, Hindalco or approved equivalent. Aluminium alloy used in the manufacture of extruded sections shall correspond to IS Designation H IS 733. Hollow aluminium alloy sections used shall conform to IS Designation HV9 WP of IS 1285. The sections shall be polished and anodized with approved colour. The average thickness of anodic coating shall not be less than 20 microns as per IS: 1868-1982. All work shall be fitted and shop assembled to a first job, and ready for erection. EDPM performed profiles shall be used for inserting into extruded pockets of sections. Glazing beads shall also be of EDPM performed profiles to hold the glass in frame under pressure. Nonmetallic setting blocks shall be used to centralize the glass in frame. All work shall be adequately braced and reinforced as necessary for strength and rigidity. Stainless steel ball bearings, housed in nylon type nylon rollers, shall be used. All Mechanical connections shall be sealed with silicon sealant. Around all windows, approved quality sealants shall be run down to make sure of total weather/water sealing.
- xii. Windows shall have aluminium grills (Diamond Window Grill from Decogrill or approved equivalent).
- xiii. Toilet doors shall be of high grade PVC (Sintex or approved equivalent) with suitable frames.
- xiv. Flush doors, wherever required, shall have shutters conforming to IS:2202 (Part I) decorative type, core of block board construction with frame of 1st classhard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters, 35mm thick including ISImarked stainless steel butt hinges with necessary screws. Frames shall be pressed steel single/double rebate door frames conforming to IS: 4351 manufactured from commercial mild steel sheet



- of 1.25 mm thickness including hinges jamb, lock jamb, bead, etc.
- xv. Inside walls and ceilings of rooms/ buildings shall be finished with acrylic washable distemper on Birla Putty or JK Putty and outside with weather resistant paint "Weather shield" of ICI or "Apex Ultima" of Asian Paints of approved color on Birla Putty or JK Putty.

Rain water pipes of pvc shall be provided. Only approved make shall be used. RCC channels for cables, pipe trenches etc. shall have provision of MS chequered plate / PVC coated MS Chequred cover plate/ electrical room (as per equirement) and payment for chequred plates shall be paid as per SOR item of Structural works.

- xvi. Inserts shall be provided to suit the technological requirements.
- xvii. All exposed flat roofs shall be treated with "Aquashield APP" of STP or "Davco Armour shield" of Chryso over a layer of screed concrete as per supplier's specification.
- xviii. If sloping roof is provided as per design drawing, the same shall be finished with decorative plaster.
- xix. Grade slab in flooring shall be of 150mm thick RCC of M-25 grade, 100 thick P.C.C. (M-10) over a compacted sand layer of 250mm on well-prepared sub base.
- xx. Flooring & skirting in SCADA room, Office/ Control room, Verandah shall be provided with 10mm to 12 mm thick vitrified ceramic tiles (600 x 600) mm of make Asian/Kajaria/Johnson / Somany etc.) on a bed of 20mm thick cement mortar of 1:4 proportion be provided. Skirting height shall be 150mm. Flooring and skirting in Electrical room shall be heavy duty vitrified tiles (600X600) mm.

Flooring and Dado in UPS / Battery room shall be provided with Acid proof tiles Pavigres of Kajaria (size 300X300mm).

The height of dado in UPS/Battery room shall be 2400 mm with respect to finished floor level. Eye/Face wash, model no.7001 pedestal mounted from Tobit Engineers shall be provided in UPS/Battery room.

- xxi. Flooring & dado of Fire Protection room, store shall be of polished Kota stone.
- xxii. All M.S. doors/window & louvered door for electrical room etc., wooden doors & leafs shall be painted with 3 coats of synthetic enamel paint on pink/zinc chromate primer.
- xxiii. All finishes, painting, locking arrangement, etc. any other works not specifically mentioned but required for completion and handing over of premises, complete in all respects.
- xxiv. Apron 0.90M/1.0 m wide (as per drawing) of PCC M-10 grade and peripheral Storm water drains in Brick around building (as per requirements).



- xxv. Electrical work including lighting inside the building and outside shall be under the scope of this contract. The quantity of fixture etc. shall be covered under Electrical SOR for the terminal.
- xxvi. Mineral fibre false ceiling of "Armstrong" or equivalent make of approved pattern shall be provided in Scada, Telecom and Electrical Rooms, office room, engineers room, discussion room etc. as mentioned in working drawings. The tiles shall be beveled/tegular tiles of size (600 x 600 x19) mm with 95% humidity resistance, light reflectance >80%, 0.7 NRC, thermal conductivity k=0.052- 0.057 w/m0c, class O/class1(BS 476 classification) fire performance or equivalent. Tiles to be laid on 24XL-hot dipped galvanised steel suspension system having rotary stitching on the main runner, 1200mm & 600mm cross tees making regular cut out for light fittings, fire spinklers, etc., fixing & finishing. Ceiling to be finished neat and complete so that no irregularities are visible after finish, including providing caps to the cut outs after fitting the fire sprinkler nozzles.
- xxvii. One or more 1000 liter overhead Sintex tank with necessary GI incoming and outgoing pipes and fittings along with 0.5 HP pump for pumping water shall be provided for supplying water in toilets / other areas.
- xxviii. Toilets and pantry fixtures shall be provided as follows: EWC no. 20024 of Hindware, Flat back urinal no. 60002 of Hindware, Pedestal type Wash Basin no. 10010 of Hindware, Stainless steel Sink of size 410X410 of Nirali, unless mentioned otherwise in architectural drawings.
- xxix. Toilets to have first quality chromium plated fittings taps, faucets, stopcocks, etc. of Jagaur/ Parryware/ Cera, liquid soap dispenser, towel rail, deodorant holder, coat hook, china recessed toilet paper holder, anti-cockroach chilly trap, etc.
- xxx. Toilets and pantry shall have anti-skid ceramic tiles flooring and ceramic tiles dado upto +1500 mm height from FFL.
- xxxi. Cutouts for exhaust fans to be made at beam bottom in Battery Room and Electrical Room in required numbers.
- xxxii. M.S. Cat ladder to be provided for roof approach.
- xxxiii. M.S. railing, wherever required, shall consist of handrail of 63X32X3.2 mm M.S. hollow section, 16X16 mm M.S. sq. bar balusters @ 250mm c/c and 2 nos. 25X6 mm M.S. plate running horizontally at equal distances.
- xxxiv. Water supply piping with GI pipe complete with all fittings and jointing, pipe work, bronze valves with overhead tanks with high pressure ball cock, level indicator, level control and all its connections and platform, anti-mosquito over flow grating etc.



- xxxv. G.I. conduit to be fixed in concrete as per detail drawing shall be supplied and fixed in position.
- xxxvi. Clearing all construction debris and handing over completed work site.
- xxxvii. Making as-built details on one set of construction drawings and return to Owner.
- xxxviii. Any other item not covered above but required for proper functioning of the building.

Note:

- 1. The construction of the building shall be done as per detailed construction. drawings to be issued to the successful tenderer. Offer can be prepared by the tenderers based on the enclosed architectural and standard drawings and on lump sum unit rate (per sqm) for complete building work.
- 2. The payment for completed works shall be made as follows:
 - a. For superstructure all items (above Plinth Beam Level) as listed above shall be payable as per enclosed drawing No.PMC/05/11/STD/CNG/001.
 - b. Centerline measurement for building shall be considered for payment purpose.
 - c. For substructure e.g. foundations, plinth beam etc. and other items such as apron, peripheral drains, steps etc. respective SOR items shall be payable.
- 3. For electrical wiring, illumination and fixtures refer relevant parts of specification for Electrical Works. All Electrical works shall be paid under respective Electrical Items. However, all required civil works for electrical, instrumentation/ are in contractor's civil scope of work.

4.14. PRE-CAST COMPOUND WALL

Complete works for the construction of Pre-cast compound wall is included in the

scope. Brief description of major civil work items shall be as follows: -

- a. Excavation of earth and concrete grouting.
- b. column size of 150 X 150 with 3mm HT steel 7 pcs.
- c. Height of the column shall be 3 meters from Ground level with M25 grade of concrete.
- d. 12 mm thick plaster in 1:3 on exposed brick surface.
- e. Column foundation with PCC M-15(1:2:4), size of foundation is 2' X 3'.



f. Plank size is 1 feet with 2" thick and 8 Pcs of 3mm HT steel.

4.15. EXTERNAL SEWERAGE & STORM WATER PIPING

Complete works for the installation and proper functioning of external sewerage and drainage is included in the scope.

Brief description of major items shall be as follows:

- a. Earth work in excavation and back filling.
- b. PCC M-15 (1:2:4).
- c. Laying pipes (SW, RCC pipe 150 / 300 mm dia).
- d. Connection to Municipal manhole.
- e. Restoration of site and clearing the debris.

External sewerage shall be provided inclusive of all related works, as per approved detailed drawings to be issued to the successful tenderer. Offer to be prepared by the tenderer based on the enclosed drawings and on lump sum unit rate (per RM) pipe laid.

4.16. ROADWORK

Complete works in making of road over well-compacted sub grade (CBR 4.0 - 5.0 in soaked condition) is included in the scope.

Brief description of major items shall be as follows:

- a. Preparation of sub grade including dressing to camber, making good all undulations, re-rolling with power road roller of 8 to 12 tons' capacity etc.
- b. Supply, stacking, and laying two layers of 115 mm thick WBM with 90 mm to 45 mm graded stone aggregate stone screening and blending material including screening, sorting, spreading to template and consolidation with power roller of 8 to 10 tons' capacity etc. using kankar, murum and red bajri etc.
- c. Supply, stacking and laying one layer of 75 mm thick base course WBM with 63 mm to 45 mm graded stone in the same fashion as above.
- d. Supply, stacking and laying one layer of 75 mm thick base course WBM with 53mm to 22.4 mm graded stone in the same fashion as above.
- e. Providing and applying 75 mm thick Bitumen macadam with tack coat.



- f. Providing and applying tack coat using hot straight run bitumen of grade 80/100 by spraying with Mechanically operated spray unit fitted with boiler, after cleaning and preparing the WBM surface @ 0.75 Kg/Sqmt.
- g. Providing two layers of 25 mm thick premix carpet surfacing with 2.25 cum. and 1.12 cum. of stone chipping of 13.2 mm and 11.2 mm size respectively per 100 sqmt and 52 kg and 56 kg of hot bitumen per cum of stone chipping of 13.2 mm and 11.2 m size respectively including a tack coat with hot straight run bitumen including consolidation with road roller of 6 to 9 tons' capacity etc. complete with paving asphalt 60/70 with no solvent.

Road making shall be done as per approved detailed construction drawings to be issued to the successful tenderer. Offer to be prepared by the tenderer based on the enclosed drawings and on lump sum unit rate (per SqM) of premix carpet surface laid.

4.17. PRE-CAST SLAB

Brief description of main items shall be as follows:

Heavy duty 600mmx550mmx70mm thick precast Slab in trenches shall be provided and fixed as per instruction of Engineer-in-charge.

4.18. PROVIDING AND LAYING FLOOR HARDENER

Heavy duty non- metallic hardener compound of STP, Roff, Fosroc, CICO of approved manufacture or equivalent laid in panels at all locations over well compacted concrete bed complete with all works, with minimum coverage as per manufacturers' specifications, drawings and as directed by EIC shall be provided and laid. All preparation and laying to be done under specialist supervision and a performance guarantee be furnished for a long term service life.

4.19. GROUTING WITH NON-SHRINKABLE COMPOUND

Brief description of major items shall be as follows:

Ready mix non-shrink cementitious grout of compressive strength 30N/mm2 / 45 N/mm2 as per SOR shall be provided and laid manually or by pumping at all positions. This shall include shuttering, compacting, edging, repairing, sealing and curing for shutdown repairs, base grouting of rotating equipment and other installation complete. This shall be as per specifications, site sketches/drawings and direction of the EIC.

Minimum coverage as per manufacturers' recommendations shall be applied in absence of actual field consumption data.



LIST OF RECOMMENDED MAKES & MANUFACTURERS

Sl.No	Description	Manufacturers
1	Glazed tiles / Ceramic tiles / Vitrified ceramic tiles	M/s. HR Johnson; M/s. Kajaria Tiles, M/s. Somany Floor & Wall Tiles, Bell-Ceramics, M/s.NITCO, M/s. Murudeshwar Ceramics Ltd.
2	FLOOR HARDENR	CICO, Fosroc,Sika
3	STEEL DOORS, ROLLING SHUTTERS & PRESS STEEL DOOR FRAMES	M/s Shakthi Met-Door, M/s. Madhu Industries, M/s. Deccan Structural Systems Pvt. Ltd., M/s. NCL Seccolor Ltd.,
4	ALUMINIUM DOORS, WINDOWS, CURTAIN WALLS / STRUCTURAL GLAZING USING INDAL / JINDAL / HINDALCO SECTIONS	Indal , Bhoruka, Hindalco, Jindal M/s. ALFAB Products.
5	GLASS: (Plain/Frosted clear / tinted float glass)	M/s Modigaurd, M/s Saint-Gobain, M/s Asahi, M/s. Hindusthan Safety Glass Works Ltd
6	HARDWARE FITTINGS & FIXTURES:	M/s Shalimar Hardware. M/s Everite, M/s Hardwyn, M/s Earl Bihari, M/s Godrej & Boyce, Secur Industries. M/s EBCO: M/s Godrej & Boyce mfg. Ltd. M/s CROWN
7	EXPANSION JOINT AND TARFELT WATERPROOFING	M/s Shalitex; M/s Tiki Tar industries; M/s STP Ltd. (Ms Shalimar Tar Products); M/s Lloyd Insulation (I) M/s Pidilite M/s IWL
8	INTEGRAL WATER: PROOFING COMPOUND	Accoproof, Cico; Impermo Lafarge, Fosroc, Roffe, Sika,
9	WATERPROOFING TREATMENT	Sika, Fosroc, Roffe, Overseas water proofing corporation, Chowgule Texsa, Pidilite,
10	CEMENT PAINTS, EXTERIOR EMULSION PAINTS, DISTEMPER, ACRYLIC EMULSION PAINTS, ENAMEL PAINTS & FLAT OIL PAINTS	M/s Asian Paints; M/s Berger Paints; M/s Goodlass Nerolac; M/s Jenson Nicholson;
11	FALSE CEILING / PARTITION	India gypsum, Armstrong, Lafarge boral gypsum limited, Luxalon
12	DECORATIVE LAMINATES	Decolam, National, Formica, Greenlam, Century (merino)



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13	DOOR CLOSERS, FLOOR SPRING	Everite, Garnish, HARDWYN, DORMA
14	SEALANTS	Ge Silicon, Dow corning, Bostik, Pidlite Industries
15	CONCRETE PAVER BLOCKS	Basant Beton, Cobble stones, Abideep Interlock Pavers, pvt. Ltd., Pave Stone Marketing (P) Ltd., Designers Pavings& Tiles Pvt. Ltd., Bessers Concrete Paver Blocks.
16	SANITARY APPLIANCES	Parryware, Hindustan Sanitary Ware & Industries ltd., Neycer.
17	CP BRASS FITTINGS, WASTE COUPLINGS, BOTTLE TRAPS	Jaquar, Essco, Nova, Gem, Marc, Essess, Jupiter aqua, Grohe.
18	PVC flushing cisterns	Parry ware, Hindware, Neycer
19	Mirror	Saint Gobain, Modigaurd, Atul glass works,
20	Plastic seat and cover	Commander,
21	Stainless Sink	Nirali, Diamond, Jaquar Dayana, Amc, etc.
22	GI Pipes	Tata, Jindal
23	GI Malleable fittings	Unik, Zoloto pec,MJM, Bimal
24	GM gate/ Globe valves	Neta, Sant, New, Leader
25	SW Pipes & Gulley traps	Perfect Kashmira, South India Corporation, TACEL, INDO PIPES
26	HDPE/UPVC Pipes & fittings	Prince, Finolex, Supreme, Kitec, Oriplast, Polyfab,
27	CPVC pipes & fittings	Flowgaurd (ASTRAL), Finolex
28	CI manhole covers	Neco
29	PVC storage tanks	Sintex, Infra, ICP (India) Pvt. Ltd. Century, Polycon
30	CEMENT	ACC, Ambuja Cement. Ultra Tech, Birla super
31	REINFORCEMENT STEEL	SAIL, TATA STEEL, RINL
32	ADMIXTURES	FOSROC,SIKA,ROFF
33	PVC PIPES	SUPREME, INFRA, PRINCE, FINOLEX



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34	ANTI TERMITE TREATMENT	PEST CONTROL INDIA LTD, MYSODET LTD., ASHOK PEST CONTROL – HUBLI, PEST CONTROL – PUNE, CHRISLINE MARKETING AGENTS- Bangalore
35	APP modified bitumen water proofing membrane	STP, BITUMAT, SIKA, IWL, PIDILITE TEXSA
36	Wall care putty for base preparation	Birla Wallcare putty, Berger, Johnson and Nicholson, JK white
37	Polysulphide Sealant	Cico, Fosroc, Pidilite, Sika
38	Chain link fencing	Tata
39	PRELAMINATED PARTICLE BOARD	Archidply
40	PRECAST RCC COVER SLAB	NUTEK, Bangalore, For any other make, contractor has to obtain prior approval from /GGPL based on their credentials.
41	CANOPY FALSE CEILING	INTERARCH For any other make, contractor has to obtain prior
42	CANOPY ROOF SHEETING	approval from /GGPL based on their credentials.
43	ACM SHEETING FOR FACIA, SIGNAGES	ALSTONE, For any other make, contractor has to obtain prior approval from /GGPL based on their credentials.
44	RMC CONCRETE PLANT	RMX (Magadi road), SCC READYMIX (Kumblagod, Kengeri Hobli), NEXGEN CONCRETE (Hennur)
45	STRUCTURAL STEEL	SAIL, TATA STEEL, RINL
46	PRECAST CONCRETE PANELS FOR COMPOUND WALL IN DE-COMPRESSION UNIT INSTALLATION	M/S SASICON For any other make, contractor has to obtain prior approval from /GGPL based on their credentials.



QUALITY ASSURANCE & QUALITY CONTROL SITE QUALITY PLAN

CIVIL ENGINEERING DIVISION



Tender No.: GGPL/C&P/SR 1000013/2022-23/07



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	g	Remarks
A: M	ATERIALS								
1.0	COARSE AGO	GREGATE							
1.1	Specific Gravity, Density, Voids	Once in 12 weeks or change of source whichever is earlier	Labor a tory Test	Weigh balance, Oven, Jar	IS:2386 Part III, IS:456, IS:383			Package Contractor	These test will be carried out while establishing design mix.
1.2	Sieve Analysis	For Industrial Projects: One sample per 200 M ³ (or part thereof) or change of source whichever is earlier. For Building Projects: One sample per 45M ³ (or part thereof)	Field Labora tory Test	Sieve set & weigh balance	IS:383	As per requirement of design mix within the limits specified in relevant IS Codes.	L-04	-do-	Mandatory Site Test
1.3	Petrography examination including visual inspection	To be done once per source	Visual / Check ing	-	IS:2386 Part IV, IS:383 (for acceptanc e limits)		-	-do-	Test will be carried out while establishing mix design



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
1.4	Deleteri ous Chemica ls	To be done once per source	Lab Tes t	Balance Sieve & Contain er	IS:2386 Part III, IS:383 (for acceptan ce limits)			-do-	Test will be carried out while establishing mix design
1.5	Soundness	To be done once per Source	-do-	Sieve Scales & Drying Oven	IS:2386 Part V, IS:383 (for acceptan ce limits)			-do-	Test will be carried out while establishing mix design
1.6	Acid & Alkali Reactivity	To be done once per source	Lab Tes t	Weigh balance	IS:2386 Part VII, IS:383			-do-	Test will be carried out while establishing mix Design
1.7	Flakiness	To be done once per Source	-do-	-	IS:2386 Part-I, IS:2386 Part VII, IS: 383			-do-	-do-



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	g	Remarks
1.8	Bulk Density	One Sample per 200 m3 or part thereof		Oven, Jar & Weigh balance	IS:2386			-do-	-do-
2.0	FINE AGGR	EGATE							
2.1	Bulka ge Moist ure	One sample per 20M ³ (or part thereof)	Routi n e Meas u remen t	Oven, Jar and weigh balance	IS: 2386 Part- III, IS : 383			-do-	Mandatory Site Test. Volume of sand and weight of water shall be adjusted as bulkage & moisture contents.
2.2	Sieve Analysis	For Industrial Projects. One sample per 200 m3(or part thereof) or change of source whichever is earlier. For Building Project. One sample per 40 M ³ (or part thereof)	Routi ne	Sieve Set, Weigh balance	IS: 2386 Part-I, IS: 383	As per requirement of design mix within the limits specified in relevant IS Codes	L - 03	-do-	Mandatory Site Test.
2.3	Particle Size and Shape	To be done once per source and to be repeated if source is changed	Routi- ne	-do-	IS: 2386 Part-I, IS : 383	Particle size shall be maximum 4.75		-do-	To be carried out during mix design.



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru- ment	Refer- ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agenc y	Remarks
						mm. Grading shall be within the limits of grading zone - III for concrete work and for mortar and grout within the limits of grading zone III & IV.			
2.4	Deleteri ous Chemica Is	do-	-do-	Balanc e, sieve & Container	IS: 2386 Part- III, IS : 383			-do-	To be carried out during mix design.
2.5	Soundness	do-	-do-	Sieve, Scales & Drying Oven	IS: 2386 Part-V, IS : 383 (for acceptan ce limit)		-	-do-	To be carried out during mix design.



<u>ANNEXURE - 1</u> MATERIAL TESTS FOR SITES

SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of check	Instru- ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agenc y	Remarks
2.6	Acid and Alkali Reactivity	To be done once per source and to be repeated if source is changed	-do-	Weigh Balanc e	IS: 2386 Part- VII, IS: 383		-	-do-	To be carried out during mix design.
2.7	Mortar Making Properties	-do-		Compressi o n testing machine, 7.06 cm cube mould s	IS: 2386 Part-VI, IS : 383		-	-do-	To be carried out during mix design.
2.8	Petrographic Examination including visual inspection	-do-	Visual / Physi c al	-	IS: 2386 Part-VI, IS : 383 (for acceptan c e limit)		-		
2.9	Specific Gravity, Density, Voids	Once in 12 weeks, change of source whichever is earlier	Measu rement	Weigh Balance	IS: 2386 Part-III				These tests will be carried out while establishing design mix.
2.10	Check Silt and Clay Content	Every 20M ³ (or part thereof)	Measu rement	_	IS: 2386 Part-II, IS : 383	Deleterious material not to exceed 5%	-		Mandatory Site Test



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
3.0	LIME								
3.1	Chemical and Physical Properties	Every 10 MT (or part thereof)	Labor a tor y Tes t		IS: 6932 (Part I to X)			do-	Optional Test if required.
4.0	CEMENT								
4.1	Fineness	For each consignment of 100T (or part thereof).	Labor a tory Test		IS: 4031, IS: 269, IS: 1489, IS: 455			Manufact urer/ Package Contractor	Manufacturer 's certificate to be furnished.
4.2	Normal consistency	-do-	Labor a tory Test	Vicat needle	IS: 4031, IS: 269, IS: 1489, IS: 456			Manufact urer/ Package Contractor	- do-



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
4.3	Initial and Final setting	-do-	Labor a tory Test	Vicat needl e	IS: 4031, IS: 269, IS: 1489, IS: 457	Depending on the type of cement and as per relevant IS		Manufact ur er/ Package Contractor	do-
4.4	Soundness, Specific Gravity	-do-	Labor a tory Test		IS: 4031, IS: 269, IS: 1489, IS: 458			Manufact ur er/ Package Contractor	- do-
4.5	Compressive Strength	Every fortnight for each consignment.	Measu rement		IS: 4031, IS: 269, IS: 1489, IS: 459	Depending on the type of cement and as per relevant IS		Package Contractor	Mandatory Site Test
5.0	CONCRETE	1							
5.1	Workabili ty, Slump test and compactio n factor test	Once a day for each batching/mixing plant	Measu rement		IS: 456, IS: 1199, Client's specificati on	Degree of workability adopted depending on the type of structure and type of		Package Contractor	Mandatory Site Test



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
						compactio n equipmen t.			
5.2	Crushing Strength	One set of 6 cubes of 150 cm. Size per 35 Cum. of concrete or part thereof for each grade of concrete per 8 hours of work or portion thereof.	Measu rement		IS: 516, IS: 1199, IS: 416 and Client's specific ati on	Shall be as per IS: 456		Package Contractor	Three specimens shall be tested at 7 days and remaining at 28 days. Mandatory Site Test.
5.3	Water Cement Ratio	At random at the time of Batching	Measu rement	Visual observatio n	As per approved design mix			Package Contractor	
5.4	Check cement content	-do-	Measu rement / by weig h batch e r		IS: 3025, IS: 456 and approved desig n mix.			Package Contractor	
6.0	WATER								



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
6.1	Tests for ascertainin g limits of solid	Once for each source of supply	-do-	Lab Test	IS: 3026 and Soil investiga ti on record.			Package Contractor	During mix design stage
6.2	Test of pH value	-do-	-do-	PH meter	IS: 456	PH value shall be less than 6.	Site log book		- do-
7.0	BRICK								
7.1	Compressiv e Strength	For designation 100, Every 50,000 or part thereof. For designation up to 75, Every 100,000 or part thereof.	Comp r essive streng t h	Compress io n Testing Machine	IS: 1077	As per brick designatio n.			Mandatory Site Test
7.2	Shape, Size, Colour	-do-	Visua 1 & meas u remen t for size		IS: 3495				Mandatory Site Test



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
7.3	Water absorption and efflorescence	One test for each source of manufacturer and every lot of 200,000.	Routi n e		IS: 3495	Water absorption: a) after 24 hours not less than 20% by weight b) after 6 hours not less than 10% by weight. c) moderat e degree of efflorescence			Mandatory Site Test
8.0	REINFORCI	EMENT STEEL							
8.1	Tensile Strength	Every 20T or every consignment purchased by Package Contractor	Measu rement		IS: 1599			Manufact ur er/ Package Contract or	Manufacturer tes t certificate must be submitted
8.2	Bend Strength	-do-	-do-		-do-			-do-	-do-



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
8.3	Surface cracks, Rusts etc.	Random	Visual	Visual					
9.0	TIMBER				l		1		
9.1	Moistu re Conten t	Every 1M ³ or part thereof	Measu rement	Moisture meter				Package Contractor	Mandatory Test
10.0	FLUSH DOO	OR SHUTTER					1		
10.1 10.2 10.3	End Immersi on Knife Test Adhesion Test	N = Total No of Shutters 1 Shutter for N<=65 2 Shutters for 65 <n<=18 0="" 00="" 180<n<="3" 3="" 300<="" 4="" 5="" for="" n="" n<="500" shutters="">=501</n<=18>	Destru ctive Test	At approved test house	IS: 2202			Package Contractor	Mandatory Test
11.0		M DOORS/ WINDOW 1	FITTIN	GS					
11.1	Thickness of Anodic Coating	Cost of fittings of every Rs. 20,000/- or part Thereof	Measu rement	At approved test house	IS: 5523			Package Contractor	Mandatory Test



SL. No	Component / Operation and Description of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
12.0	MARBLE					1		T	
12.1	Moisture absorption	For value of every Rs. 10,000/- or part Thereof	Measu rement		IS: 1124			Package Contractor	Mandatory Test
12.2	Mhose Scale hardness								Optional Test
13.0	TERRAZO		1		T	T	1	T	
13.1	Transverse Strength	Every 2000 tiles or part thereof	Site Meas u rement		IS: 1237			Package Contractor	MandatoryTest
13.2	Water absorption	-do-	Site Meas u rement		-do-			-do-	-do-
13.3	Abrasion Test	-do-	Labor a tor y Tes t		-do-			-do-	-do-
14.0		AZED TILES	136		10 777	1		I D 1	D. 1
14.1	Water absorption	Every 3000 tiles or part thereof	Measu rement	do	IS: 777	do		Package Contractor	Mandatory Test
14.2	Crazing Test	-do-	-do-	-do-	-do-	-do-	-do-	-do-	-do-



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks		
14.2	Impact Test	-do-	-do-	-do-	-do-	-do-	-do-	-do-	Optional Test		
15.0	MORTICE I	LOCK									
15.1	Testing of springs	Every 100 locks or part thereof	Measu rement	Approved Test House				Package Contractor	Mandatory Test		
16.0	BITUMEN				•		•	•			
	-				IS: 73						
17.0	STORAGE OF MATERIALS										



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
17.1	Cement	100%	Visual		IS: 4082	Covere d storage			



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
						Width of the stack shall not be more than 3 meters			
17.2	Reinforceme nt	100%	Visual		IS: 4082	Open storage. Bars of different classificatio n , sizes and length will be stacked separately.			



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
17.3	Brick	100%	Visual		IS: 4082	Open storage. Bricks shall be stacked on dry firm ground. Stacks shall be 50 bricks long and 10 bricks high. Bricks shall be placed on edge. Width of each stack shall be two bricks.			



SL. No	Component / Operation and Description of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
17.4	Aggregates	100%	Visual		IS: 4082	□ Shall be stored at site on a dry ground/ platform of planks/ old corrugated iron sheets/ floor of bricks/ thin layer of lean concrete. □ Stacks of fine aggregate and coarse aggregate shall kept in separate stockpiles.			



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
17.5	Other Bought Out Items	100%	Visual		IS: 4082	Covered storage. Materials shall be stored as per manufacturer'			
18.0 18.1	PILING PLANT & M	ACHINERY				s specification.			



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
	□ Concret e mixer Vibrators of adequate capacity Power driven rigs of adequate capacity Weigh Batchers Lighting Mobile		Visual / Physic al						
19.0	Cranes CONSTRUC	TION OF PILE							
19.1	SPT values during boring operation	100%							



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
19.2	Tolerances in position	100%	Measu rement	_	IS: 2911 (Part I/ Sec2)	Piles <600mm: 75mm or D/4 whichever is less. Piles >600mm: 75mm or D/10 whichever is more. For single pile: <600mm: 50mm or D/4 whichever is less. >600mm: 100mm.		Piling Contractor	
19.3	Control of alignme nt	100%	Measu rement	Measuring Tape	IS: 2911 (Part I/ Sec2)	Vertical pile: 1.5 % deviation maximum. Raker pile: 4%			



SL. No	Component / Operation and Description of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	g	Remarks
19.4	Chipping of pile top	100%				Manual chipping after 3 days of casting. Pneumatic tools after 7 days of casting.			
20.0		E SUSPENSION:			r			T =	
20.1	Liquid limit		Measu rement			>300% <400%		Piling Contractor	
20.2	Sand content of Bentonite powder		-do-			Not more than 7%		-do-	
20.3	Density of freshly prepared Bentonite suspension		-do-	Hydromet er	IS:9556	Between 1.034 and 1.10gm/ ml.		-do-	Shall be recorded for initial 10 piles and subsequently at every 10 th pile.
20.4	Marsh viscosity		-do-	Marsh cone		Between 30 and 60 sec		-do-	



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
20.5	PH value of Bentonite suspension		-do-	PH indicator paper strip		Between 9 and 11.5		-do-	
20.6	Density after mixing with deleterious material		-do-	Hydromet er		Maximum. 1.25gm/ ml.		-do-	Shall be recorded for initial 10 piles and subsequently at every 10 th pile.
21.0	PILE TESTI	NG							



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
21.1	Vertical Load Test (for both test & job piles)	Test pile. No of pile to be tested shall be minimum one.	Testi n g	Dial Gauge (Sensitivi ty of dial gauge: 0.01 mm)	IS:2911, Part-IV	Safe load shall be minimum of the following: (a)2/3 rd of final load against total displacement of 12 mm. (b) 50% of final load against total displacement of 10% of pile diameter.		Piling contract or	



SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
		Working pile. No of piles to be tested shall be minimum 1/2 % of total no of piles.	-do-	-do-	-do-	Maximum settlement shall not exceed 12 mm against test load 150% of working load.		-do-	
21.2	Lateral load test	Optional	Testi n g	-do-	IS:2911, Part-IV	Safe load shall be minimum of the following: (a) 50% of the final load against total displacement of 12 mm. (b) Final load against total displacement of 5 mm		-do-	



ANNEXURE - 1 MATERIAL TESTS FOR SITES

SL. No	Component / Operation and Descriptio n of test	Sampling plan with basis	Type of chec k	Instru - ment	Refer - ence docu- ment	Acceptanc e Norm	Format of Record	Testin g agency	Remarks
21.3	Pull out Test	Optional	Testi n g	-do-	IS:2911, Part-IV	Safe load shall be least of the following: (a) 2/3rd of total load against displacement of 12mm. (b) Half of the load at which load displacement ot splacement of the load at which load displacement curve breaks		do-	Initial test shall be carried out up to twice the estimated safe load. Routine test shall be carried out to 150% of the estimated safe load or 12mm total displacement.



ANNEXURE - 2 TESTING EQIPMENT FOR SITES

S L N O	BROAD CLASS	NOMENCLATURE DESCRIPTION	UTILITY	TEST PROCEDURE	REFERENC E DOCUMEN T	TO BE AVAILABL E AT SITE
1.0	ROUTINE TEST LAB. EQUIPMENT	1.1 Vicat Apparatus	Cement consistency & Penetration	Penetration of Std. Needle	IS: 5513	Yes
	EQUIPMENT	1.2 Lechatelier's test Apparatus	Cement shrinkage	Size variation after curing of sample	IS: 5514	Yes
25	ed.	1.3 Mould (Cement) (70.7x70.7x70.7 mm)	Cement cubes	Cubes made of 1:3 cement : Sand	IS: 10086	Yes
		1.4 Cement Mortar Mould Vibrator	Cube compaction	Vibration for fixed duration	IS: 10078	Yes
		1.5 Concrete Cube mould (150x150x150) mm	Concrete Cubes	-	IS: 10086	Yes
		1.6 Compressive strength Testing machine	Concrete Cube Test	Crushing strength of cube	IS: 2505	Yes
		1.7 Concrete slump cone	Workability Check	Drop in cone height of concrete	IS: 7320	Yes
		1.8 Coarse aggregate sieves	Sieve analysis	Sieving	IS: 383	Yes
		1.9 (a) Soil Core cutter (b) Proctor Compaction	To test compaction of soil	Core cut out of soil and density measured	IS: 2720	Yes
		1.10 Fine aggregate sieves	Sieve analysis	Sieving	IS: 383	Yes



		1.11 Sieve shaker	Mechanical sieving	-	-	Yes
		1.12 Aggregate impact Test Machine	Impact value of aggregate	-	IS: 9377	Yes
2.0	DIMENSIONA L & ALLIED MEASURI NG EQUIPME NT	2.1 Theodolite & levelling staff 2.2 Measuring Tape	Levelling and centre line marking and verticality measurement Dimension	Measurement and recording	-	Yes

ANNEXURE - 2 TESTING EQIPMENT FOR SITES

S L N	BROAD CLASS	NOMENCLATURE DESCRIPTION	UTILITY	TEST PROCEDURE	REFERENC E DOCUMEN	TO BE AVAILABL E AT SITE
O		2.3 Laser Beam apparatus	Verticality of structures	Centre line alignment	-	Ye s
3.0	PROCESS CONTROL	3.1 Oven	Material Drying for moisture control	Material to be kept for specific duration	-	Yes
	ACCESSORIES	3.2 Physical balance 3.3 Air entrainment meter	Weighing To determine % of air	- Samples of fresh	- IS: 1199	Yes Yes
			in fresh concrete mix	concrete to be taken and tested in the equipment		
4.0	SPECIAL TEST EQUIPMEN	NDT 4.1 Rebound hammer	Strength test of concrete	Rebound of the ball is proportional to the strength of concrete	ı	Yes



T	4.2 Ultrasonic test for concrete	Test for porosity for concrete	Speed of the ray transmitted	-	Yes
			through the concrete indicates the extend of porosity		
	4.3 Profometer/Micro covermeter	Location & diameter of reinforcement	Variation in density used to detect steel location	-	Yes
	D.T. 4.4 Portable electrically operated concrete core cutter	Strength of In-situ concrete	Core cut out of concrete tested for strength	-	Yes

SL. No	Description of Site	Workmanship Checks to be undertaken	Remarks
	Activity		



1	Earth work	(a)	Classification of Soil, for payments, if required.
		(b)	Line & level.
		(c)	Disposal lead.
		(d)	Levelling at Disposal Yard.
		(e)	Initial & Final level in Level Book.
		(f)	Rolling/Tamping/Compaction of Fills, as per IS: 2720
		(g)	Arrangement for de-watering.
		(h)	Shoring & Strutting.
		(i)	Safety (side slopes, ramps, working space around foundation, dumping
			at safe distance beyond top edge).
		(j)	Excess excavation depth properly filled for foundation works.
		(k)	Foundation bed level, bearing capacity conformance.



SL. No	Description of Site Activity	Wor	kmanship Checks to be undertaken	Remarks
2	Piling Work	a)	Diameter of Pile.	
		b)	Depth Driver.	
		c)	Sequence of driving in a pile group.	
		d)	Set for last 10 blows or as specified.	
		e)	Type and size of hammer and its stroke, in case of double acting	
			hammer, No. of blows per minute & stroke.	
		f)	Type and condition of packing on the pile head and or dolly in the	
			hammer.	
		g)	Driving resistance record through variable strata in case of driven cast-	
			in-situ pile.	
		h)	Bore log in case of Bored pile.	
		i)	Density of slurry in case of Bentonite slurry pile.	
		j)	Date & time of driving.	
		k)	Date of concreting & time gap between end of driving & concreting.	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
		l) Standing ground water level.	
		m) Ground level at the commencement.	
		n) Length of Pile.	
		o) Length of Permanent casing.	
		p) Set at intervals during last 3 Meters.	
		q) Concrete Mix.	
		r) Details of Reinforcement.	
		s) Volume of Concrete supplied to pile against theoretical volume.	
		t) Water tightness of pile before concreting.	
		u) Eccentricity	
		v) Deviation for Verticality.	
		w) Condition of pile head at cut-off.	
		x) Routine load test results.	
		y) Initial load test results.	
		z) Integrity test results of each pile.	



SL. Description of Site Activity	Workmanship Checks to be undertaken	Remarks
3 Concretin g Works	 (a) Check quality and size of coarse aggregate with special reference to undersize/oversize materials, disintegrated/self-materials, earth and other foreign materials beyond limit, organic impurities. (b) Fineness modulus of sand, silt content, bulkage, foreign materials in sand. (c) Check formwork. (d) Line, level of concrete. (e) Honeycombed surface in concrete. (f) Strength of Concrete. (g) Check Mix Boxes. (h) Mixing of concrete by hand/machine. (i) Use of Vibrator. (j) Slump of concrete. 	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
4	Formwork	a) Line, level and dimensions as per drawing.	
		b) Cross bracing of supporting framework.	
		c) Diagonal bracings.	
		d) Ground support rigidity to avoid settlement.	
		e) Plumbness of shores.	
		f) Wedge tightening of shores.	
		g) Thickness of shutter to withstand pressure of wet concrete.	
		h) Leakproofness of shutter (IS: 457)	
		i) Demoulding agent/Oiling of shutter.	
		j) Facility for removal of formwork in proper sequence.	
		k) Avoid premature removal.	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
5	Reinforce d Concrete Works	 a) Sieve analysis of coarse aggregate to check oversize, undersize, improperly graded aggregate. b) Check presence of disintegrated/soft or foreign materials in aggregates. c) Quality of sand, Silt content, Bulkage test. d) Quality of Cement and age of Cement (1st in 1st OUT system) e) Quality of water for mixing and curing. f) Slump test. g) Cube Tests. h) Cover Block thickness and integrity (cover not reduced more than 2mm or increased by more than 10mm). i) Whether reinforcement exposed on removal of forms. j) Tensile testing of steel reinforcement, as required. k) Gauge of binding wire and its use at all joints. l) Reinforcement placement as per drawing and top reinforcement to be supported by chairs etc. 	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
		m) Spacing of laps and staggering and length of lap.	
		n) Mix design record/requirements.	
		o) Rigidity and evenness of centring & shuttering.	
		p) Finish requirement of surface.	
		q) Throating and moulding requirements as per drawings.	
		r) Line and level requirements as per drawing.	
		s) Expansion joint contraction, joint provisions.	
		t) Fixing of inserts, conduits, bolts to proper alignment.	
		u) Hacking of green concrete for future plastering.	
		v) Adequate curing.	
		w) Corrosion protection requirements of reinforcement.	
		x) Drainage provisions on roof surface (slope & spout)	
		y) Gangway placement for concreting to be independent of reinforcement.	
		z) Rigidity of reinforcement cage to avoid distortion during concreting	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
		aa) Compaction requirements of concrete by needle vibrators/Form vibrator etc.	
		 bb) Provisions at construction joint - Waterbar - Nozzles etc. cc) Provision of dowel bars 12mm □ 300 long (400mm either side) at B C/C on construction joint surface. 	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
6	Brickwork	 (a) Quality of bricks for strength, dimensional accuracy, efflorescence water absorption and evenness of backing. (b) Sand quality for fineness modulus and Silt content. (c) Cement quality. (d) Mixing of Mortar to structural space. (e) Thickness of joint not exceeding 10mm. 	
		 (f) Raking of joints in green stage by raking tool (15mm deep) (g) Filling of vertical joints properly. (h) Soaking of bricks. (i) Line and level of brickwork. (j) Plumbness. (k) Brick corners are provided with proper brick closer not by brick bat. (l) Top coarse in plinth, windowsill, below RC slab and parapets are with brick on edge. 	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
		(m) Type of scaffolding.	
		(n) Filling of scaffolding potholes.	
		(o) Brick coarses are in level.	
		(p) Proper bonding of main wall with cross wall (No tooting joints)	
		(q) Brickwork taken-up in layers not exceeding 1 Metre.	
		(r) Proper provision of reinforcement in brick-wall.	
		(s) Lateral bonding of brick-wall to steel/concrete columns.	
		(t) Filling-up voids between brick -wall and door/windows shutter.	
		(u) Adequate curing of brickwork.	



SL. Descr No of Sit Activ	te	orkmanship Checks to be undertaken	Remarks
7 Stone Maso Work	e (a) onary (b)	Strength of Mortar. Mix of Mortar. Quality of Sand - Silt content & fineness modulus. Whether joints fully filled with Mortar. Whether required number of bond stones provided (Marking of bond stone during construction needed for easy identification). Extent of spalls in hearting.	



SL. No	Description of Site Activity	Woı	kmanship Checks to be undertaken	Remarks
8	Flooring Work			
8.1	Cement	(a)	Aggregates, Sand - refer PCC Works.	
	Concrete	(b)	Strength.	
	Floor	(c)	Thickness.	
		(d)	Hardener type and mix.	
		(e)	Panel size.	
		(f)	Curing arrangement.	
		(g)	Polishing requirement.	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
8.2	Cast in situ Mosaic Floor	 a) Aggregates, Sand - refer PCC Works. b) Strength. c) Thickness. d) Hardener type and mix. e) Panel size. f) Curing arrangement. g) Polishing requirement. 	



SL. No	Description of Site Activity Terrazzo Tile Floor	Workmanship Checks to be undertaken	Remarks
8.3		(a) Quality of Lime.(b) Strength test of tile.	
		(c) Abrasion test of tile.	
		(d) Thickness of Joint & Colour matching.(e) Polishing by 80, 120, 320 Grade Carborandum.	
		(e) Polishing by 80, 120, 320 Grade Carborandum.(f) Any hollow sound when tapped.	
		(g) Curing arrangement.	
8.4	Glazed	(a) Size of Tile	
	Tile Floor	(b) Thickness of Tile (□ 0.5 mm)	
		(c) No glazed surface at edges.	
		(d) Free from crazing.	



SL. No	Description of Site Activity	Workmanship Checks to	o be undertaken	Remarks
9	Woodwork	a) Specified timber is	is used.	
		b) Grade of Wood.		
		c) Free from cracks, o	dead knots etc. as per grade specification.	
	d) Seasoning done or not.			
		e) Moisture content b	by moisture meter.	
		f) Lines, level and sn	moothness of finish & planning.	
		g) Glue utilised in joi	ints or not and whether bamboo pin (min.	
		10mm dia.) used	l in joint.	
		h) Tolerance of finish	hed size.	
		i) Use of preservative	ve against masonry surface.	
		j) Size of Holdfasts a	as per Specification.	
		k) Thickness and dim	nension of shutter in door panels.	
		l) Thickness of glass	s panels and quality of glass.	
		m) Whether Putty pro	ovided between glass-pane and sash bar & glass pane	
		and beading (No ra	rattling sound when tapped).	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
	Activity	 n) Whether healing in flush door is of specified type solid core, hollow, particle board etc. o) Quality of Ply and Glue in flush door (Not Urea formaldehyde). p) Destruction test of flush door (End emersion, Knife test etc.) q) Fitting quality and number as per Specification. r) Surfacing of steel fittings as per specification (bright, black Japan, black enamelled, oxidised) and plate thickness. s) Anodising thickness of aluminium fittings. 	
		 t) Type of brass fittings (Extruded/Cast) with plate thickness. u) Check whether top & bottom surface of shutter properly painted or note. v) Painting of shutter to be done after checking of Knots etc. w) Provision of Chits and Sand blocks. x) Quality of Mesh in meshed shutter (No. of mesh/Sq.inch.) and folding of mesh at the edges before fixing. 	



SL. No	Description of Site	Wor	rkmanship Checks to be undertaken	Remarks
10.	Activity Steel doors /Windows /grills	a)	Size of frame and corner welding of frames (Flush butt welded as per specification)	
		b)	Proper fixing of Hinge.	
		c)	Primer Coating.	
		d)	Provision of Tie Rod at bottom of Door frame for proper size	
			maintenance during fixing.	
		e)	Line, Level & Plumb.	
		f)	Quality of friction hinges.	
		g)	Quantity of Putty (□185 Gm. Per Meter length) and painting of Putty	
			within 2 weeks.	
		h)	Number of glazing Clips (4 to 6).	
		i)	Provision of metal beadings as per specification.	
		j)	Material of striking plate in windows (brass or not as per specification)	
		k)	Welding of grill before fixing glazing without deformation of frame.	
		l)	Length of screws for fixing grills to windows frames.	



SL. No	Description of Site	Workmanship Checks to be undertaken	Remarks
11.		 (a) Name of Manufacturer, Specification, Batch Number, Colour, Date of Manufacture, ISI Marking on Paint Contai (b) Cracks, voids, pores on masonry surface properly filled. (c) Nail-holes, cracks on wood surface properly filled. (d) Steel surface preparation, sand blasting, derusting etc. as per Specification. (e) Soundness and adherence of Old Paint. (f) Paint quality (No. adulteration by thinner and quality of Primer. (g) Application of each coat of Paint for uniformity, paint drop, dabs, brush-marks, waves and variation of colour. (h) Difficult to reach areas like edges, corners, nuts, bolts etc. are properly painted. (i) Spilled Paints on floors & walls properly cleaned. 	Remarks
		(j) Painting of fan hooks and exposed surfaces of inserts as per Specification.	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
12	Roofing Works	(a) Slope of roof.	
		(b) Quality of Lime, Waterproofing materials etc. as per Specification.	
		(c) Size & quality of brick ballast.	
		(d) Weight & quality of bitumen felt.	
		(e) Over-lapping of bitumen felts.	
		(f) Test by ponding with water.	
		(g) Formation of ridges & valleys.	
		(h) Drip course provision.	
		(i) Embedding of felt at vertical wall.	
		(j) Hollering at the vertical turning point below felt.	
		(k) Grouting of rainwater pipe.	
		(I) Proper termination of Tarfelt near RWP.	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
13	Water Supply & Sanitary works	 (a) Quality of G.I. Pipe with original colour paint for class of pipe and IS Mark on surface of pipe. (b) Joining of pipe with white lead and jute yarn on threads. (c) Pipes are approachable for future maintenance. (d) Provision of union at each Stop Cock. (e) Supporting pipes with clamps suitably embedded & jammed in wall (f) Quality/Weight of water-tap, Stop Cocks, Ball Valves and Water Supply fittings as per Specification and ISI Mark. (g) Provision of Vent. Pipe above Overhead Tank to avoid Airlock. (h) Leading over-flow pipe from Tank upto roof drain spout. (i) Mosquitoproof cemplings at over flow pipe of Tank & Cisterns. (j) Quantity of lead provided at Spigot & Socket joints of pipes. (k) Internal surface of HCI Pipes to have painting with Dr. Angus Smith Solution. 	
		(I) Hydraulic testing of Water Supply system.	



SL. No	Description of Site Activity	Workmanship Checks to be undertaken	Remarks
		(m) Proper quality HCI Pipes used (Dimension, Weight, Finish, ISI Marks etc.) in Sewage System (C.I. Rain-water pipes) are not used in Sewage System.	
		(n) Flushing test of flushing Cistern.	
		(o) Hume Pipe Class, makes, dimension and test certificate.	
		(p) Stone ware pipe make, dimension, finish, glazing and conforming to Class AA/Class A as per Specification.	
		(q) Quality of Line and level of system.	
		(r) Floor tap water-seal to be minimum as per Specification.	
		(s) Manhole covers, road gully groutings weight, sizes, make & finish.	
		(t) Commercial quality ceramic fittings are not used.	
		(u) Brand name, quality, dimension, colour, ISI marking for sanitary fixtures as per Specification.	
		(v) Static head water test for HCI Pipe in section (4.5 Metres)	
		 (w) Test Performance for Water closets (six pieces of toilet papers 150 x 115mm flushed completely 3 times out of 4 trials) Water supply network tested to a pressure of 10 Kg/Cm² before taking over the system. 	



FORMAT NO.L -01

DETERMINING THE GRADING OF SAND (FINAL AGGREGATE)

Date of Testing:				Type of	PERCENTA	REMARKS
Wt. Of samples:				aggregate	GE	(GRADING
gm	S.				PASSING	ZONE)
SI.N	RETAINED	WT.RETAI	PERCENTAGE	CUMULATIV		
O.	ON IS	NED	WT.	E		
	SEIVE NO.		RETAINED	%WT.		
				RETAINED		
1	10 mm					
2	4.74 mm					
3	2.36 mm					
4	1.18 mm					
5	600 microns					
6	300 microns					
7	150 microns					
8	75 microns					

REFERENCE GRADING ZONES OF FINAL AGGREGATE (IS 383)

		(12 (12 (12 (12 (12 (12 (12 (12 (12 (12		
IS SEIVE	GRADING ZONE I	GRADING ZONE II	GRADING	GRADING ZONE IV
DESIGNATION			ZONE III	
10mm	100	100	100	100
4.75 mm	90-100	90-100	90-100	95-100
2.36 mm	60-95	75-100	85-100	95-100
1.18 mm	30-70	55-90	75-100	90-100
600 microns	15-34	35-59	60-79	80-100
300 microns	5-20	8-30	12-40	15-50
150 microns	0-10	0-10	0-10	0-15



FORMAT NO.L-02

METHODS OF DETERMINING THE GRADE OF COARSE AGGREGATE

Date of Testing: Wt. Of samples:				Type of aggregate	PERCENTA GE	REMARKS (GRADING
gm			DED CENTE A CE		PASSING	ZONE)
SI.N	RETAINED	WT.RETAI	PERCENTAGE	CUMULATIV		
O.	ON IS	NED	WT.	E		
	SEIVE NO.	•	RETAINED	%WT.		
1	40			RETAINED		
1	40 mm					
2	20 mm					
3	16 mm					
4	12.5 mm					
5	10 mm					
6	4.75 mm					
7	2.36 mm					
GRADING ZONE	S OF COARSE AG	GREGATE (IS 3	83)			
IS SEIVE	40 mm	2	0 mm	16 mm	12.	5 mm
DESIGNATION						
40	95-100	1	00	-	-	
mm						
20	30-70	9	5-100	100	100	0
mm						
16	-	-		90-100	-	
mm						
12.5 mm	-	-		-	90-	-100
10	10-35	2	5-55	30-70	40-	-85



mm

4.75 mm 0-5 0-10 0-10 0-10 2.36 mm - - - -

FORMAT NO.L-03

DATE:

COMPRESSIVE STRENGTH OF CEMENT

CONCRETE AGENCY:LOCATIONS:CUBE SIZE:DATE OF CAST:TYPE OF CEMENT:

GRADE OF CONCRETE : WATER/ CEMENT RATIO :

ADDITION OF

PLASTICISER :

WEIGHT OF CUBE :

WEIGHT	of CCBE	•					
CUBE TEST				7 DAYS STRENGTH		28 DAYS STRENGTH	
						FAILURE	STRENGTH
SL. NO	MARK	DATE	SLUMP	FAILURE	STRENGTH	LOAD (KN)	(Kg/Cm ²)
				LOAD (KN)	(Kg/Cm^2)		
1							
2							
3							
4							
5							
6							



Tender No.: GGPL/C&P/SR 1000013/2022-23/07

PERIOD	SPECIFICATION	ACTUAL (AVERAGE)
7 DAYS	Kg/Cm ²	Kg/Cm ²
28 DAYS	Kg/Cm ²	Kg/Cm ²



FOR STEEL STRUCTURAL WORKS SPECIFICATION FOR FABRICATION, ERECTION AND PAINTING OF STEEL STRUCTURES



CONTENTS

GENERAL

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1.0 GENERAL

1.1 This specification shall apply to steelwork in the City Gate station at Bhimadole.

SECTION-1 FABRICATION OF STEEL STRUCTURES

2.0 SCOPE OF WORK

- **2.1** The scope of work under fabrication includes, but not limited to, the following:
 - a) Preparation and submission of material indents, bolt lists and bought-out items list.
 - b) Procurement and Supply of Colour coated sheets for structures including packing, loading, transportation, unloading, stacking & storing on skids or supports at site.
 - d) Procurement and supply of all consumables like bolts nuts, hooks, Polycoated hook bolts, washers, electrodes, paints, shims, packs, etc., taking into consideration allowance for spares and wastage.
 - e) Preparation and submission of fabrication drawings (based on Design drawings) assembly drawings for sheeting, modification / rectification sketches, erection drawings, as-built drawings, bill of materials, bolts list and shipping documents for approval of purchaser.
 - f) Submission of design calculation for non-standard connections, temporary bracings etc. for approval of purchaser.
 - g) Cold straightening of section and plates, whenever they are bent and kinked.
 - h) Fabrication of all steel structural components covered under design drawings including M S, G I Gratings are generally described under the scope of the project.
 - i) Making arrangements for and conducting tests, such as chemical analysis, physical and Mechanical tests on raw materials where specified/as directed by the Purchaser/Consultant. The scope of testing includes conducting tests at shop as well as at site in line with the instruction of Purchaser/Consultant.
 - j) Making arrangements for providing all facilities for conducting ultrasonic, X-ray or gamma ray tests of welds, getting the tests



conducted by reputed testing laboratories making available test films / graphs, reports and interpretation. The scope of testing includes conducting tests at shop as well as at site in line with the instruction of Purchaser/Consultant.

- k) Controlled Assembly of steel structural components at shop, wherever required.
- l) Preparation of steel structural surfaces for painting as provided in the specifications / drawings.
- m) Application for one primer coat of painting at shop, as specified in the design drawing/specifications.
- n) Loading, transportation from fabrication workshop to site of erection and unloading of all steel structural components / units / assemblies, Colour coated sheets, FRP sheets and their erection complete with all fittings and fixtures.
- o) Receipt of free issue items if any from Purchaser's place, handling and unloading at site and fabrication/erection.
- p) Dismantling wherever required and disposal of debris at a place designated by Purchaser or re-erection of the same as instructed by Purchaser.
- q) Rectification of damaged structures including fixing, aligning, levelling, bolting and welding etc.
- r) Preparation of "As-built" drawings.

3.0 PREPARATION OF FABRICATION AND ERECTION DRAWINGS

- **3.1** Fabrication drawings shall be prepared based on design drawings of steel structures.
- 3.2 Drawing shall be prepared in metric system as per IS:696-1972 and IS:813-1986. The fabrication drawings shall specify the following details: -
 - (a) Type, size and length of welds in case of welded connections, (specifying clearly shop or site weld). Length of weld specified shall be effective length (excluding end crates).
 - (b) In case of bolted joints, arrangement of bolts and specification of bolts, nuts etc. (specifying clearly shop and site bolts).
 - (c) Specification of electrode/wire flux.



- (d) If required special provision to be mentioned in the drawings for handling of structures during and after fabrication.
- (e) Specification of paint and corresponding surface preparation for painting.
- (f) General arrangement/marking plan.
- (g) Reference to design drawings.
- (h) Material list indicating mark number-wise material requirement giving size, weight, material specification, identification number of each items, number of pieces required etc.
- (i) Layout with all connecting members with blown up joint details wherever required, in order to specify clearly various fabrication and erection requirements as per design drawings.
- (j) Specification of preparation of mating surfaces in case of connection by HSFG bolts.
- (k) Appropriate edge preparation in case of butt/groove welds in accordance with IS:9595-1996, for all plates and sections having thickness greater than 8 mm.
- (l) Erection clearances in order to facilitate smooth erection at site (ref clause no.17.2.2.of IS: 800- 2007).
- (m) Each erection piece shall be clearly identified by an erection mark in these drawings. All loose members shall be given part mark, which shall be 'wired on' the main erection piece for despatch.
- **3.3** Fabrication drawings shall be prepared in such a manner that structures can be dispatched from fabrication shop to erection site with maximum economic transportable size, so as to reduce work involved at site to a minimum.
- 3.4 Bracings shall be connected for 50% of the capacity of the member or the force specified in the design drawing, whichever is more. (for single angle bracing member, consider full area as effective for this purpose).
- 3.5 Standard simple beam connections, unless otherwise stated in the drawings, shall be designed and detailed for 60% beam shear / moment carrying capacity.
- 3.6 Wherever there is risk of nuts becoming loose due to vibration, lock



nuts shall be provided, or nuts shall be welded after alignment and tightening.

- 3.7 For all connections by permanent bolts, two nos. of washers shall be used. One washer bearing against the head and the other bearing against the nut.
- 3.8 Detailing of structural steel members subject to dynamic loading shall be such as to ensure smooth transition of load, as well as best behaviour under stress due to fatigue. Welding across tension flange of crane girders is not permitted.
- 3.9 For detailing connection, the allowable stress for materials, welds, bolts etc, shall be as per IS:800- 2007 and IS:816-2007, or as specified in the drawing.
- 3.10 The contractor shall be responsible for design and detailing all connections. The design of connection shall provide adequate strength for transfer of force in the structural elements, as indicated on design drawings. Detailing shall be such that erection shall be convenient and free from all interfaces, drilling and cutting at site.

4.0 MATERIALS

4.1 Structural Steel

Structural steel and other related materials for construction shall conform to **ANNEXURE-F**.

- 4.1.2 Due to non-availability of specified materials, suitable substitutions may be provided with the consent of the purchaser. Such substitution shall be incorporated in the "As-built" drawings.
- 4.1.3 All the items are to be cut as per requirements of the drawing. If joints are to be provided in any item, in order to meet requirements of size and shape, cutting plan showing locations of joints shall be prepared for consideration of purchaser. Joints provided shall be incorporated in "As-built" drawings.
- 4.1.4 Rolling and cutting tolerances shall be as per IS: 1852:1985.
- 4.1.5 Only tested materials shall be used unless use of untested materials for certain secondary structural members is permitted by purchaser. If test certificate for the material is not available from the main producer, the following tests shall be carried out at the discretion of the purchaser.



- (a) Chemical Composition
- (b) Mechanical Properties
- (c) Weld ability test
- 4.1.6 Where steel castings are to be used the same shall conform to IS: 1030:1998

4.2 Bolts and Nuts

- 4.2.1 Black hexagonal bolts, nuts and lock-nuts shall conform to IS:1363(Part1to3):2002
- 4.2.2 Precision and semi-precision hexagonal bolts, screws, nuts and lock-nuts shall conform to IS:1364(Part 1 to 6):2002.
- 4.2.3 High tensile friction grip bolts shall conform to IS: 3757:1985 and high strength structural nuts shall conform to IS: 6623:2004, and hardened steel washers to IS: 6649:1985.

5.0 STORING OF MATERIALS

5.1 Materials shall be stored and stacked properly ensuring that place is properly drained and is free from dirt. It shall be ensured that no damage is caused due to improper stacking.

6.0 MATERIAL PREPARATION

- 6.1 Cut edges shall be finished smooth by grinding or machining wherever necessary. Sufficient allowance (3 mm to 5 mm) should be kept in the items in case machining is necessary.
- 6.2 Cutting may be effected by gas cutting, shearing, cropping or sawing. In gas cutting of high tensile steel, special care is to be taken to leave sufficient metal to be removed by machining so that all metal that has been hardened by flame is removed.
- **6.3** Sufficient shrinkage allowance (@ 1mm/M) shall be kept wherever heavy welding is involved.
- **6.4** Straightening and bending shall be done in cold condition as far as practicable.
- 6.5 If required, straightening and bending may be done by application of heat between $900\Box C$ and $1100\Box C$. Cooling down of the heated item shall be done slowly.



7.0 DRILLING AND PUNCHING OF HOLES

- **7.1** Drilling and punching of holes for bolts shall be done as per IS: 800:2007, unless otherwise specified by the purchaser.
- **7.2** Drifting of holes for bolts during assembly shall not cause enlargement of holes beyond permissible limit or damage the metal.
- 7.3 Holes for bolted connection should match well to permit easy entry of bolts. Gross mismatch of holes shall be avoided.
- **7.4** Permissible deviation in holes for mild steel bolts of normal accuracy and high strength bolts are given in the

ANNEXURE-A.

8.0 ASSEMBLY FOR FABRICATION

- 8.1 Fabrication of all structural steelwork shall be in accordance with IS:800-2007 and in conformity with various clauses of this specification, unless otherwise specified in the drawings.
- **8.2** Fabrication of structures shall preferably be taken up as per the sequence of erection.
- 8.3 All erection units shall bear erection mark no. and reference drg no. at a prominent location on the structures for easy identification at site.
- **8.4** Fabricated structures shall conform to tolerance as specified in this standard and in IS:7215-1974. In case of contradiction, tolerances specified in this standard shall prevail.
- 8.5 All the components of structures shall be free from twist, bend, damage etc,
- **8.6** Assembly of structures shall be carried out by using suitable jigs and fixtures in order to obviate distortion during welding.
- 8.7 Cutting of items specially for truss, bracing, bunker, hopper, galleries surge girder, portal etc, shall be done only after checking of sizes as per Layout.
- **8.8** Surface, wherever machining is specified, shall be either planed or milled or ground to ensure maximum contact.
- **8.9** If end-milling or machining is planned after the assembly is over,



- sufficient allowance (5 mm to 15 mm) shall be kept in the items where milling/machining is to be done.
- **8.10** If pre-bending of the plate is required to avoid welding distortion, it shall be done in cold condition.
- 8.11 If extra joints are required to be provided in column, crane girder etc, approval should be obtained from the purchaser. However, as general guidance following is suggested. Splice joints of column and crane girder shall of full strength butt weld and wherever possible shall be located at zones of minimum or substantially lesser stress.
- **8.12** Splice joints of flange and web should be staggered.
- 8.13 Sufficient trial assembly of fabricated components (despatch elements) shall be carried out in the fabrication works to control the accuracy of workmanship.
- **8.14** Where necessary, washers shall be tapered or otherwise suitably shaped to give the heads of nuts and bolts satisfactory bearing.
- **8.15** The threaded portion of each bolt shall project through the nut at least by two thread.
- **8.16** Tolerance of assembled components of structures is given in **ANNEXURE- B**.
- **8.17** Permissible deviations from designed (true) geometrical form of the despatch elements shall be in accordance with IS: 7215-1974.

9.0 WELDING

- **9.1** The Contractor shall work out welding procedure for Purchaser's approval, considering the following factors: -
 - (i) Specification and thickness of steel.
 - (ii) Specification of electrode or/and base wire.
 - (iii) Welding process (manual arc welding, submerged arc welding).
 - (iv) Type of structures to be welded (thickness of components meeting at a joint).
 - (v) Pre and post heating requirement.



- (vi) Preparation of fusion faces.
- (vii) Sequence of welding.
- (viii) Weather condition.
- (ix) Use of jigs and fixtures etc.
- (x) Type of non-destructive testing to be carried out.
- (xi) Inspection procedure to be followed
- (xii) Design requirements of the joints.
- 9.2 Welding of any load bearing structure shall be carried out only by the person who has passed welder's qualification as per IS:7318 (Part-I)-1974.
- **9.3** All metal arc welding shall be carried out as per IS:9595-1996.
- 9.4 Submerged arc welding of mild steel and low alloy steel shall be as per IS:4353-1995.
- **9.5** Electrode shall conform to IS 814: 2004
- **9.6** Electrodes shall be stored in a dry place. Electrodes whose coatings are damaged due to absorption of moisture or due any other reason shall not be used.
- 9.7 Low Hydrogen electrodes and flux for submerged welding shall be dried as per manufacturer's recommendation at 250-300 Degree C for one hour in drying oven before use.
- **9.8** For suitability of wire flux combination, procedure test shall be carried out as per IS:3613-1974 if so required.
- 9.9 Welding shall be done by electric arc process. Generally submerged arc, automatic & Semi-automatic welding shall be employed. Only where it is not practicable, manual arc welding may be resorted to. In case of manual arc welding, recommendations of electrode manufacturer are to be strictly followed.
- **9.10** Welding surface shall be smooth, uniform, free from fins, tears notches or any other defect which may adversely affect welding.
- **9.11** For multi-run weld deposit, the next run should be done only after thorough removal of slag and proper cleaning of surface.



- 9.12 Fillet weld shall have the correct profile with smooth transition into parent metal. Dressing of welds, if specified, shall be done by such method which does not cause grooving and other surface defects on the weld or on the parent metal.
- 9.13 All butt welds shall start and end with run-on and run- off plates. All such plates shall be carefully trimmed off by gas cutting after welding is over.
- **9.14** Fillet welds shall not be stopped at corners but shall be returned round them.
- 9.15 If butt weld is to be ground flush with the surface of the member as per drawing. adequate reinforcement shall be built up and then the same shall be chipped off and ground flush. The grinding is to done in the direction of stress flow till the transverse marks are eliminated.
- **9.16** Welding shall not be done under such weather conditions which might adversely affect the efficiency of the welding.
- 9.17 Manipulators shall be used wherever necessary and shall be designed to facilitate welding and ensure that all welds are easily accessible to the operators.
- **9.18** Stress relieving after welding shall be done if especially called for in the drawing or specification. Ends of structural members and portions of gussets receiving welding at site shall be left unpainted.
- **9.19** Permissible deviation in assembly of weld joints shall be in accordance with

ANNEXURE - C.

10.0 INSPECTION & TESTING

- 10.1 The purchaser/Inspector shall have free access at all times to those parts of Contractor's or his Sub- Contractor's works which are concerned with the fabrication of steel works and shall be afforded all reasonable facilities at all stages of preparation, fabrication and trial assemblies for satisfying himself that the fabrication is being undertaken in accordance with the provisions of relevant specification.
- All gauges and templates, tools, apparatus, labour and assistance for checking shall be supplied by the contractor free of charge. The



purchaser /Inspector may at his discretion, check the test results obtained at the Contractor's works, by independent test at the Government Test House or elsewhere, and should the material so tested be found to be unsatisfactory, the cost of such test shall be borne by the Contractor.

- 10.3 Contractor shall make all necessary arrangements for stage inspection by purchaser/Inspector during the fabrication at shop and incorporate all on-the-spot instructions / changes conveyed in writing to the Contractor.
- 10.4 Material improperly detailed or wrongly fabricated shall be reported to the Purchaser/Inspector and shall be made good as directed. Minor misfits which can be remedied by moderate use of drift pins, and moderate amount of reaming and slight chipping may be corrected in that manner, if in the opinion of the Purchaser/Inspector the strength or appearance of the structure will not be adversely affected. In the event the Purchaser/Inspector directs otherwise, the items will be rejected and a completely new piece shall be fabricated. The cost of correcting errors shall be to the account of the Contractor.
- i) The Purchaser/Engineer shall have the power:
 - a) To certify, before any structure is submitted for inspection, that the same is not in accordance with the contract, owing to the adoption of any unsatisfactory method of fabrication.
 - b) To reject any structure as not being in accordance with specifications & drawings.
 - c) To insist that no structure or parts of the structure once rejected is resubmitted for inspection/test, except in cases where the Purchaser / Inspector authorised representative considers the defects as rectifiable.
 - ii) If, on rejection of structure by the Purchaser/Inspector the Contractor fails to make satisfactory progress within the stipulated period, the Purchaser/Inspector shall be at liberty to cancel the contract and fabricate or authorize the fabrication of the structures at any other place he chooses, at the risk and cost of the Contractor, without prejudice to any action being taken in addition to terms of General Conditions of Contract.



- iii) The Purchaser / Inspector's decision regarding rejection shall be final and binding on the Contractor.
- iv) The specifications prescribe various tests at specified intervals for ascertaining the quality of the work done. If the tests prove unsatisfactory, Purchaser/Inspector shall have liberty to order the Contractor to re-do the work, done in that period and/ or to order such alterations and strengthening that may be necessary at the cost of the Contractor and the contractor shall be bound to carry out such orders failing which the rectification/redoing will be done by the Purchaser through other agencies and the cost recovered from the Contractor.
- v) Notwithstanding any inspection at the workshop the Purchaser/Inspector shall have the liberty to reject, without being liable for compensation any fabricated members or materials brought to site that do not conform to specifications / drawings.
- vi) All rejected materials shall be removed from the site of fabrication by the Contractor at his own cost and within the time stipulated by the Purchaser/Inspector.

11.0 CONTROL IN WELDING

Before inspection, the surface of weld metal shall be cleaned of all slag, spatter matter, scales etc. by using wire brush or chisel.

b) Dye Penetration Test (DPT)

This shall be carried out for all important fillet welds and groove welds as desired by purchaser for both statically and dynamically loaded structures to check the following:

- i) Surface cracks
- ii) Surface porosities

Dye Penetration Test shall be carried out in accordance with American National Standard ASTM E165.

11.1 The extent of quality control in respect of welds for structural elements for both statically and dynamically loaded structures shall be as follows and shall be conducted by the contractor at his own cost: -



- **a) Visual Examination -** All welds shall be 100% visually inspected to check the following:
 - i) Presence of undercuts
 - ii) Visually identifiable surface cracks in both welds and base metals.
 - iii) Unfilled craters
 - iv) Improper weld profile and size
 - v) Excessive reinforcement in weld
 - vi) Surface porosity

Before inspection, the surface of weld metal shall be cleaned of all slag, spatter matter, scales etc. by using wire brush or chisel.

b) Dye Penetration Test (DPT)

This shall be carried out for all important fillet welds and groove welds as desired by purchaser for both statically and dynamically loaded structures to check the following:

- i) Surface cracks
- ii) Surface porosities

Dye Penetration Test shall be carried out in accordance with American National Standard ASTM E165.

12.0 ACCEPTABLE LIMITS OF DEFECTS IN WELD

- **12.1** Limits of Acceptability of welding defects shall be as follows:
 - a) Visual inspection & Dye Penetration Test The limits of acceptability of defects detected during visual inspection and Dye Penetration Test shall be in accordance with American National Standard ANSI/AWS D1.1 for statically as well as dynamically loaded structures.



13.0 RECTIFICATION OF DEFECTS IN WELDS

- In case of detection of defects in welds, the rectification of the same shall be done as follows:
 - i) Al2l craters in the weld and breaks in the weld run shall be thoroughly filled with weld.
 - ii) Undercuts, beyond acceptable limits, shall be repaired with dressing so as to provide smooth transition of weld to parent metal.
 - iii) Welds with cracks and also welds with incomplete penetration, porosity, slag inclusion etc. exceeding permissible limits shall be rectified by removing the length of weld at the location of such defects plus 10 mm from both ends of defective weld, and shall be re-welded. Defective weld shall be removed by chipping hammer, gouging torch or grinding wheel. Care shall be taken not to damage the adjacent material.

14.0 COMPLETION DOCUMENTS

- On completion of work, the Contractor shall submit to the Purchaser the following documents:
 - a) The technical documents according to which the work was carried out.
 - b) Copies of the "As built" drawings showing thereon all additions and alterations made during the fabrication.
 - c) Manufacturers test certificates
 - d) Certificates/documents on control checking
 - e) Test of welds
 - f) Inspection Certificates issued by Purchaser/Consultant for the material/structures.
- 15.0 In addition to provision of erection and transport equipments, the scope of work includes supply of tools and tackles, consumables, materials, labour and supervision and shall cover the following:



- a) Storing and stacking of all fabricated structural components/units/assemblies at site storage yards till the time of erection.
- b) Transportation of structures from storage yard to site of erection, including multiple handling, if required.
- c) All minor rectification / modifications such as:
 - i) Removal of bends, kinks, twists etc. for parts damaged during transportation and handling.
 - ii) Reaming of holes which do not register or which are damaged, for use of next higher size bolt.
 - iii) Plug-welding and re-drilling of holes which do not register and which cannot be reamed for use of next higher size bolt.

Drilling of holes which are either not drilled at all or are drilled in incorrect position during fabrication.

- d) Fabrication of minor missing items as directed by the purchaser.
- e) Verification of the position of embedded anchor bolts and inserts w.r.t. line find levels, installed by others based on Geodetic Scheme / Bench mark / Reference co -ordinates to be furnished by the Purchaser.
- f) Assembly at site of steel Structural components wherever required, including temporary supports and staging.
- g) Marking arrangements for providing all facilities for
 - Conducting ultrasonic x-ray or gamma ray tests by reputed testing laboratories
 - ii) Making available test films / graphs, with reports / interpretation.
- h) Site Rectification of damaged portions of shop primer by cleaning and application touch-up paint.
- i) Erection of structures including making connections by bolts / High strength Friction Grip bolts/welding as per drawing.
- j) Alignment of all structures true to line, level plumbs and



- dimensions within specified limits of tolerance.
- k) Application at site after erection, required number of coats of primer and finishing paint as per specification and drawing.
- Rectification of structures as per Preliminary acceptance report and Final acceptance report.

SECTION 2 ERECTION OF STEEL STRUCTURE

16.0 ERECTION

16.1 General

- 16.1.1 Erection shall be carried out in accordance with IS: 800:2007 and other relevant standards referred to therein.
- 16.1.2 For safe and accurate erection of structural steelwork, staging, temporary support, false-work etc. shall be erected as required.
- 16.1.3 The fabricated materials received at erection site shall be verified with respect of marking on the key plan/marking plan or shipping list.
- 16.1.4 Any material found damaged or defective shall be stacked separately and the damaged or defective portions shall be painted in distinct colour for identification and the same shall be brought to the notice of the Purchaser.

16.2 Erection of Structures

- 16.2.1 Erection work shall be taken up after receipt of clearance from the purchaser.
- 16.2.2 For safety requirements during erection, provisions in IS:7205:1974, IS:7969:1975 and other relevant Indian standards shall be followed.
- 16.2.3 Erection shall be carried out with the help of maximum PMChanization possible.
- Prior to commencement of erection, all the erection equipment, tools, tackles, ropes etc. shall be tested for their load carrying capacity. Such tests may be repeated at intermediate stages also if considered necessary and frequent visual inspection shall be done of all vulnerable areas and components to detect damages or



distress in the erection equipment, if any.

- 16.2.5 Following shall be taken care of during erection, whenever necessary: -
- 16.2.5.1 Temporary bracing, whenever required, shall be provided to sustain forces due to erection loads and equipment etc. Erected parts of the structures shall remain stable during all stages of erection when subjected to the action of wind, dead weight and erection forces etc. Specified sequence of erection of vertical and horizontal structural members shall be followed.
- 16.2.5.2 Erected members shall be held securely in place by bolts to take care of dead load, wind load and erection load.
- 16.2.5.3 All connections shall achieve free expansion and contraction of structures wherever provided.
- 16.2.5.4 No final bolting or welding of joints shall be done until the structure has been properly aligned.
- 16.2.5.5 For positioning beams, columns and other steel members, the use of steel sledges is not permitted.
- 16.2.5.6 Instrumental checking of correctness of initial setting out of structures and adjustment of alignment shall be carried out in sequence and at different stages as required. The final leveling and alignment shall be carried out immediately after completion of each section of a building.
- 16.2.5.7 All structural members shall be erected with erection marks in the same relative position as shown in the appropriate erection and shop drawings.
- 16.2.5.8 The contractor shall design, manufacture, erect and provide falsework, staging temporary support etc. required for safe and accurate erection of structural steelwork and shall be fully responsible for the adequacy of the same.
- 16.2.5.9 The Contractor shall also provide facilities such as adequate temporary access ladders, gangways, tools & tackles, instruments etc.to purchaser for his inspection at any stage during erection.



17 RULES & REGULATIONS OF SAFETY, ELECTRICITY BOARDS, FACTORY ETC.

17.0 The Contractor shall at all times comply with all relevant factory acts, electricity rules, safety regulations etc. as per statutory regulations of Central / State Government.

18 **DEVIATIONS**

18.0 Should the Contractor wish to deviate from any specification or details shown on the purchaser's approved drawings and / or Technical Specifications, he shall obtain the purchaser's written authority before proceeding with the deviations.

19 MEASUREMENTS

19.0 Structural Steel

Structural steelwork will be measured by the metric tonne and as per IS: 1200 (part-8)

- 1993 and IS: 1200 (part-9) -1973 subject to provisions outlined below:
 - a) The calculation of quantities shall be based on unit weights for structural sections as given in IS: 808-1989. The payments will be made on the basis of weights of members given in the approved fabrication drawings. However, any changes on the above weights during fabrication erection, payment shall be based on sketches Approved by the purchaser.
 - b) In the event the I.S. does not specify any mode of measurement for a particular item of work, the same shall be measured as per any other relevant international standard or as directed by the Purchaser.
 - c) The weight of all plates and sections shall be calculated from the approved drawing using the minimum overall square or rectangular dimensions and theoretical weight, no deduction being made for skew cuts, holes etc. In the case of plates, other than gussets, the actual dimensions shown on approved drawings will apply unless approved otherwise by the purchaser based on cutting diagram of mother plates.
 - d) The weight of all welding runs, bolt, stanchion base packing, cuttings to waste and rolling margins, and coatings of paint, will be excluded from the measured



- weight and shall be deemed to have been allowed for in the rates for structural steelworks quoted by the Contractor.
- e) Temporary works and all other materials not included in the permanent works shall be excluded from any measurement for payment.

SECTION-3 PAINTING OF STEEL STRUCTURES

20 SURFACE PREPARATION FOR PAINTING

20.0 General

The steel surface which is to be prepared shall be cleaned of dirt and grease and the heavier layers of rust by grinding prior to actual surface preparation to a specified grade.

21 Mechanical Cleaning

21.0.1 Manual/power tool cleaning.

Manual/power tool cleaning shall be done as per grade St-2 or St-3, of Swedish Standard Institution SIS 055900.

- i) Grade St-2: Thorough scraping and wire brushing, machine brushing, grinding etc. This grade of preparation shall remove loose mill scale, rust and foreign matter. Finally, the surface is to be cleaned with a vacuum cleaner or with clean compressed air or with clean brush. After preparation, the surface should have a faint metallic sheen. The appearance shall correspond to the prints designated St-2.
- ii) Grade St-3: very thorough scraping and wire brushing, machine brushing, grinding etc. The surface preparation is same as for grade St-2 but to be done much more thoroughly. After preparing the surface, it should have a pronounced metallic sheen and correspond to the prints designated St-3.

22 PAINTS AND PAINTING

- **22.0** For use of specific painting system, the paint manufacturer's specification shall prevail.
- **22.1** General compatibility between primer and finishing paints shall be established through the paint manufacturer supplying the paints.



- Before buying the paint in bulk, it is recommended to obtain sample of paint and establish "Control Area of Painting". On control area surface preparation and painting shall be carried out in the presence of manufacturer of paint.
- In order to ensure that the supplied paint meets the stipulation in design drawing/ specification, if required, samples of paint shall be tested in laboratories to establish quality of paint with respect to (i) Viscosity (ii) adhesion/ bond of paint in steel surfaces (iii) adhesion/simulated salt spray test (iv) chemical analysis (percentage of solids by weight) (v) normal wear resistance as encountered during handling & erection (vi) resistance against exposure to acid fumes etc.
- **22.4** Whole quantity of paint for a particular system of paint shall be obtained from the same manufacturer.
- 22.5 Thinners, wherever used, shall be as per recommendation of the paint manufacturer.
- 22.6 Areas which become inaccessible after assembly of structures shall be painted before assembly, after cleaning the surfaces as specified.
- Wherever shop primer painting is scratched, abraded or damaged, the surfaces shall be thoroughly cleaned using emery paper and power driven wire brush wherever warranted, and touched up with corresponding primer. Touching up paint shall be matched and blended to eliminate conspicuous marks.
- 22.8 If more than 50% of the painted surface of an item requires repair, the entire item shall be Mechanically cleaned and new primer coats shall be applied followed by finishing coats as per painting specification.

All field welded areas on shop painted item shall be Mechanically cleaned (including the weld area proper, adjacent areas contaminated by weld spatter or fumes and areas where existing primer. intermediate / finishing paint is burnt). Subsequently, new primer and finishing coats of paint shall be applied as per painting specification.

Application of paint shall be by spraying or brushing as per IS:487-1985 and in uniform layers of 50% overlapping strokes. Painting shall not be done when the temperature is less than 5□C or relative humidity more than 85%, unless manufacturer's recommendations



- permit. Also painting shall not be done in frosty or foggy weather. During application, paint agitation must be provided wherever such agitation is recommended by the manufacturer.
- Paint shall be applied at manufacturer's recommended rates. The number of coats shall be such that the minimum dry film thickness (DFT) specified is achieved. The dry film thickness of painted surfaces shall be checked with ELCOMETER or measuring gauges to ensure application of specified DFT.
- All structures shall receive appropriate number of primer and finishing coats in order to achieve overall DFT as per design drawings/ specifications. First coat of primer paint shall be applied not later than 2-3 hours after preparation of surface, unless specified otherwise.
- 22.12 The finishing paint as specified shall be of approved colour and quality. The under coat shall have different tint to distinguish the same from the finishing coat.
- 22.13 Edges, corners, crevices, depressions, joints and welds shall receive special attention to ensure that they receive painting coats of the required thickness.
- 22.14 Machine-finished surface shall be coated with white lead and tallow before shipment or before being put into the open air.
- 22.15 Parts of surfaces embedded in concrete shall be thoroughly cleaned of grease, rust, mill scale etc. and shall be given a protective coat of portland cement slurry immediately after fabrication. No paint shall be applied on this part.
- Zinc-rich primer paints, which have been exposed several months before finishing coat is applied, shall be washed down thoroughly to remove soluble zinc salt deposits. In similar circumstances, the surfaces of paint based on epoxy resin should be abraded or lightly blast cleaned to ensure adhesion of next coat.
- 22.17 Surfaces which cannot be painted but require protection shall be given a coat of rust inhibitive grease according to IS:958-2000 or equivalent international standard.

24.0 PAINTING SYSTEM

The recommended painting system for general service requirement of steel structures Refer **ANNEXURE-E**.



ANNEXURE-A

Permissible deviations in pitch and gauge of holes for bolts of normal accuracy (high strength bolts included)

Description	Hole diameter (mm)	Permissible Deviations in Spacing (mm)	Permissible deviations in each group of holes	
1	2	3	Carbon Steel 4	Low Alloyed Steel 5
a) Deviation in the hole diameter.	Upto 17.0 Above 17.0	+1 +1.5	No limits	
b) Ovality (difference between the biggest and the smallest diameter)	Upto 17.0; Above 17.0;	+1 +1.5	No limits	
c) Curves, exceeding 1mm and cracks onthe hole edges	_	-	Not Permissible	
d) (i)Non-coincidence of holes in separate details of the assembled unit, upto 1mm	_	_	Upto 50%	Upto 50%
(ii) Above 1 mm upto 1.5 mm	-	-	Upto 10%	Upto 10%
e) Slope of axis	_	Upto 30% of the thickness of unit	No limits	No limits



ANNEXURE -B

TOLERANCE OF ASSEMBLED COMPONENTS OF STRUCTURES

Description of Deviation (\pm) in mm for the Elements of Structures Components of Length in Meters

Structures	Up	1	5	10	15	20	Over
	to	to	to	to	to	to	25
	1	5	10	15	20	25	23
	_	1 2	4		_	_	0
1	2	3	4	5	6	7	8
I.i) Deviations from the dimensions assembled.							
Length & width of the Details Cut:							
a) Manual gas Cutting as per marking	3	3.5	4	4.5	5	-	-
b) With shears or with a saw as per marking	2	2.5	3	3.5	4	-	-
c) With shears or with a saw with a stop	1.5	2	2.5	3	3.5	-	-
d) Machine Gas Cutting	2	2.5	3	3.5	4	-	-
ii)Length and width of planed ends processed on	1	1.5	2	2.5	3	-	-
Edge Planing Machine							
II i) Distance between the Centres of the End holes.							
a) Drilled according to marking	2	2.5	3	3.5	4	-	-
b) Drilled according to a gauge with bushing	1	1.5	2	2.5	3	-	-
ii)Distance between the centres of adjacent holes							
a) Drilled according to marking or to a gauge	1.5	-	-	-	-	-	-
b) Drilled according to a gauge with bushings	0.5	-	-	-	-	-	-
III. Deviation in the dimensions of despatch elements							
after completion of fabrication, Assembled in							
positioners or in other Devices with							
clamps in fixed positioners and also							
a) According to guide blocks with pins.	2	3	5	7	8	9	10
b) Assembled with bolts	3	5	8	11	12	14	15
c) Size (length & width) between Milled surface (for all cases of assembly)	1	1.5	2	2.5	3	3.5	4
d) The same made in separate details during	2	3	5	7	8	9	10
machining & fixed during the assembling work with clamps							
e) The same drilled according to positioners in	1	1.5	2	2.5	3	3.5	4
finished structures							



<u>ANNEXURE – C</u>

PERMISSIBLE DEVIATION IN ASSEMBLY OF WELDED JOINTS:

Description		tion	Permissible deviation	Sketch
A.		Square-butt Joints:		→ d ← ↓
	a)	Gap between the ends of plates (d)	± 1 mm	
	b)	Stepping of one plate over the other (s)	1 mm	
В.		Single Vee- groove Joints (without backing strip)		
	a)	Bevel angle (A°)	± 5°	A
	b)	Gap between two Plates (d)	± 1 mm	Y +
	c)	Stepping of one plate over the other (s)	2 mm	
	d)	Root thickness (t	1 mm	
C.		Double V- groove Joint Stepping of one		
	a)	plate over the others (s)	2 mm	
	b)	Deviation in the value of Root thickness (t)	1 mm	
	c)	Deviation in Bevel angle (A°)	± 5°	
	d)	Deviation in value of Gap (d)	± 1 mm	
D.		Lap Joints:		



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b)	-	5 mm 1 mm	B O
E.	Tee fillet Joints: a) gap between the edge of the web and the surface of the flange(e)		



$\underline{ANNEXURE} - \underline{D}$

TOLERANCES IN ERECTED STEEL STRUCTURES

Sl No.	Description	Tolerance (mm)
A.	COLUMNS	
1.	Deviation of column axes at foundation top level with respect to true axes.	
	i) In Longitudinal direction	± 5
	ii) In Lateral direction	± 5
2.	Deviation in the level of bearing surface of columns at foundation top with respect to true level	± 5
3.	Out of plumbness (verticality) of column axis from true vertical axis and measured at column top:	
	a) For columns without any special requirements :	
	i) Upto and including 30m	±H/1000 or ± 25mm height whichever is less
	ii) Over 30 m height	± H/1200 Or ± 35mm maximum
	b) For column with special requirements like cranes or such similar requirements :	
	i) Upto and including 30m	±H/1000 or ± 20mm height whichever is less
	ii) Over 30 m height	\pm H/1500 or \pm 25mm maximum
4.	Deviation in straightness in longitudinal & transverse planes of columns, at any point along the height	± H/1000or ± 10mm whichever is less.
5.	Difference in the erected position of adjacent pairs of columns along length or across width of building, prior to connecting trusses / beams, with respect to true distance.	± 5
6.	Deviation in any bearing or seating level with respect to true level.	± 5
7.	Difference in bearing levels of a member on adjacent pair of columns both across and along the building, from the true difference.	± 5



NOTE:i) Tolerance specified under 3(a) and 3(b) should be read in conjunction with 4 and 5.

ii) "H" above is the column height in mm

В.	TRUSSES	
1.	Shift, at the centre of top chord member of truss with respect to the centre of span or vertical plane passing through the centre of bottom chord.	\pm 1/250 of height span in mm or
		± 15 mm whichever is less
2.	Lateral shift of top chord at the centre of of truss span from the vertical plane passing through the centre of supports of the truss.	\pm 1/1500 of span of truss in mm or \pm 10 mm whichever is less
3.	Lateral shift in location of truss from its true vertical position.	± 10
4.	Lateral shift in location of purlins from true position.	± 5
5.	Deviation in difference of bearing levels of trusses or beam from the true (L =span) difference.	L/1200 or 20 mm whichever is less
6.	Relative shift in the track location of crane stops (end buffers) along the crane tracks, along track	1/1000 of gauge S in mm subject to maximum of 20 mm gauge.



PAINTING SYSTEM

Enamel System:

i) Primer Paint : Two coats of Zinc Phosphate in

phenolic alkyd medium (DFT=40 microns/coat)

ii) Intermediate Paint: One coat of Synthetic MIO (ie:

micaceous iron oxide) (DFT=75

microns/coat)

iii) Finishing paint : Two coats of Synthetic enamel (DFT=25

microns/coat) conforming to IS: 2932-2003

<u>ANNEXURE - F</u>

MATERIAL OF CONSTRUCTION (AS APPLICABLE)

- 1. Unless otherwise specified in the drawing:
 - a) All rolled sections and plates shall conform to Grade-A as per IS:2062-1999.
 - b) Plated structures subjected to dynamic loading shall conform to Grade-B as per IS: 2062-1999.
- 2. Steel sheets shall conform to IS:1079-1994.
- 3. Steel tubes for structural purposes shall conform to IS:1161 1998(Grade YST-240).
- 4. Collectors and down comers shall conform to IS:3589-2001.
- 5. All black hexagonal bolts, nuts and locknuts shall conform to IS:1363(Part 1 to 3 -2002 and IS:1364(Part 1 to 6)-2002(for precision and semi- precision hexagonal bolts). Washers shall conform to IS:5369-1975.
- 6. All HSFG bolts shall conform to IS:3757-1985.
- 7 Covered electrodes for arc welding shall conform to IS:814-1991. Coding of electrodes shall be as follows:
 - a) ER 421 'C' x for mild steel of Grade A and Grade-B as per IS:2062-1999.
 - b) EB 542 'C' x H3X



for

- i) Mild Steel of Grade B as per IS:2062-1999 for dynamically loaded structures (arising out of crane, vibratory screen, equipment etc.)
- ii) For SAIL-MA micro alloyed steel 350 HYA/HYB.
- iii) When combined thickness (CT) for steel conforming to IS:2062-1999 exceeds 40mm as per Fig.1

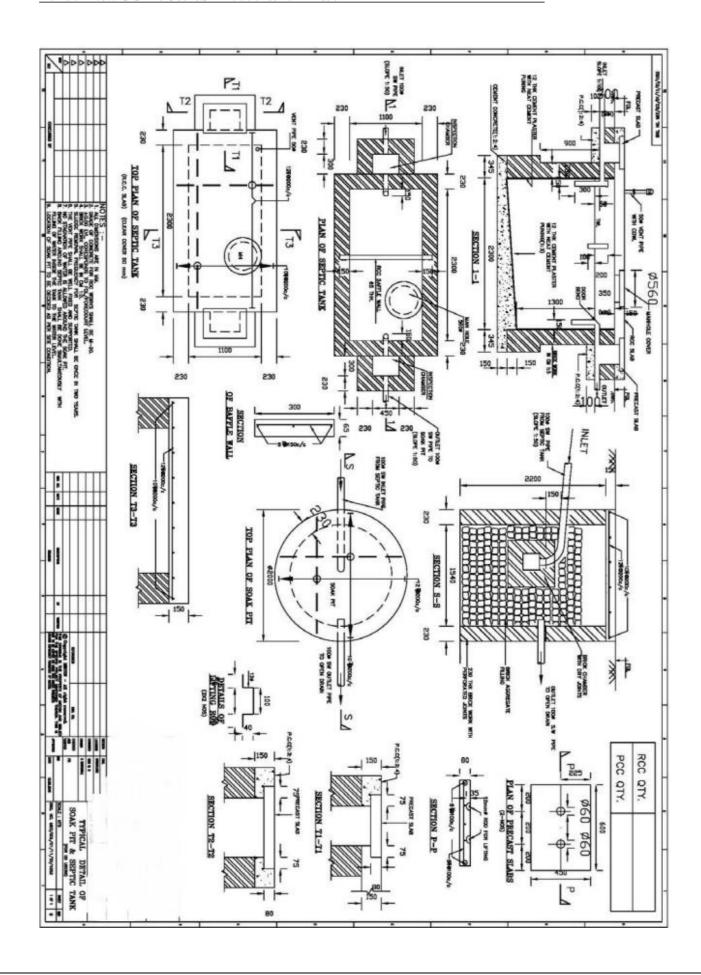
"C" is the value of current as recommended by the electrode manufacturer.

STRUCTURAL AND CIVIL DRAWINGS

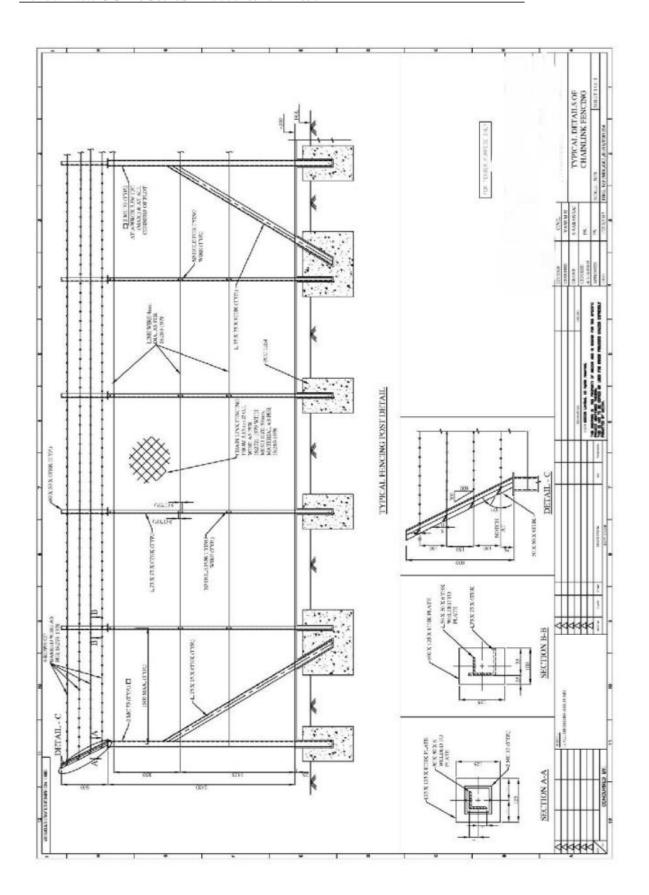
LIST OF STANDARD DRAWINGS (CIVIL AND STRUICTURAL)

Sl	Descripti	Document No./ Drawing	Rev.
No.	on	No.	No.
1	TYPICAL DETAILS OF SS TUBE TRENCH	PMC/GGPL/G1/01/TD/1051	Rev. 0
2	TYPICAL DETAILS OF SOAK PIT & SEPTIC TANK	PMC/GGPL/G1/01/TD/1052	Rev. 0
3	DETAILS OF CHAIN LINK FENCING	PMC/GGPL/G1/01/TD/1054	Rev. 0
4	DETAILS OF BOUNDARY WALL	PMC/GGPL/G1/01/TD/1055	Rev. 0

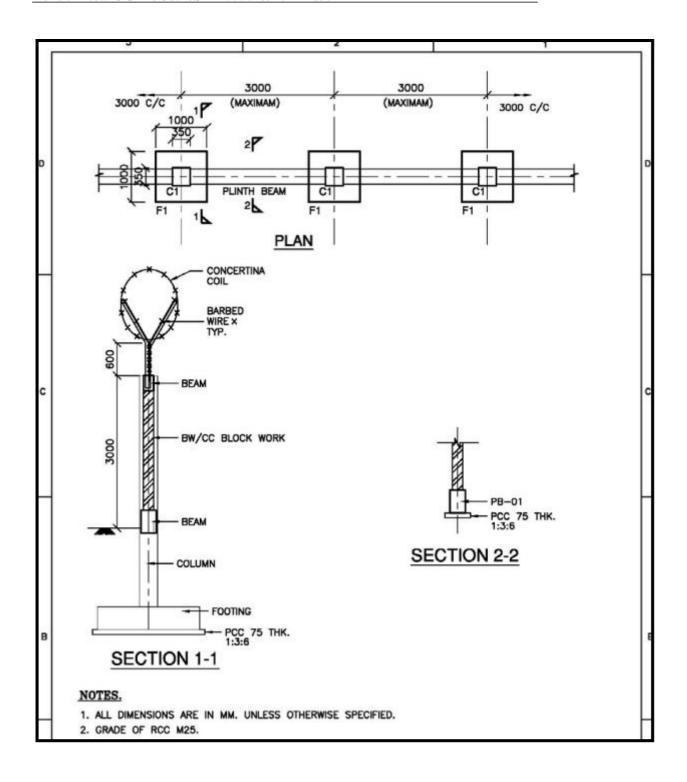




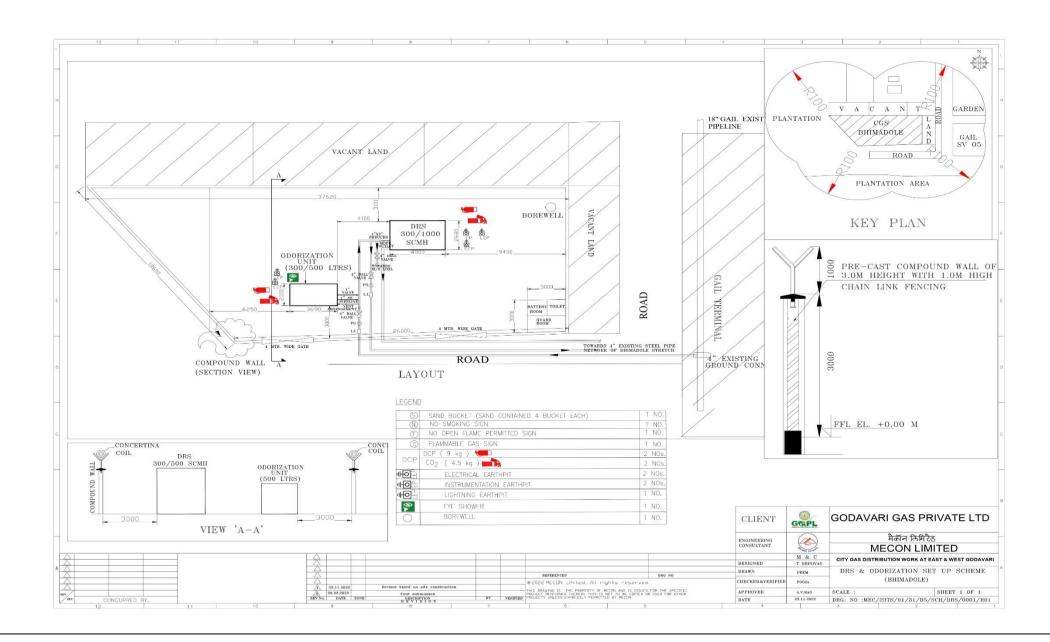






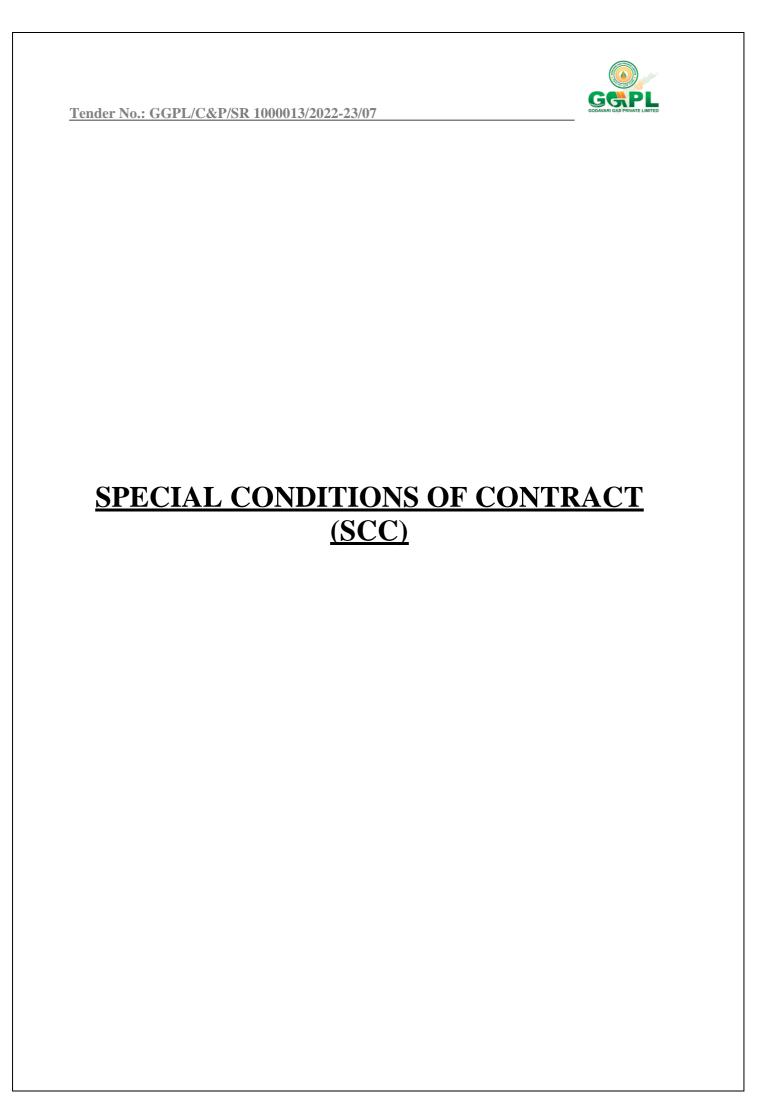








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SPECIAL CONDITIONS OF CONTRACT

1. PROJECT DETAILS

Godavari Gas Private Ltd (GGPL), a Joint Venture Company of M/s APGDC and M/s HPCL, is engaged in development of CNG & City Gas Distribution Networks (CGDN) at two Geographical Areas of East & West Godavari districts for distribution of CNG and PNG to various consumer segments. Presently, GGPL is planning to implement CNG & City Gas Distribution Network (CGDN) to supply Natural Gas to domestic, commercial, industrial and automobile Consumers in the Geographical Areas (GAs) of East & West Godavari districts of Andhra Pradesh.

GGPL invites bids for the item(s) in complete accordance with the Bid Documents / Attachments for above stated Project under single stage two e-envelopes system from competent suppliers meeting the Bid Evaluation Criteria as detailed herein.

2. BRIEF SCOPE OF WORK

The brief scope of work includes the following:

GGPL intend to construct City Gate Station at Bhimadole in the Geographical Area of West Godavari districts.

The scope of work includes supply, construction, erection / installation, painting, testing and commissioning of Civil, Structural and Electrical Works for CGS facility at Bhimadole in West Godavari district.

3. TIME SCHEDULE

The contract shall be valid for a period six months from the date of issuance of Fax of Acceptance (FOA) with a provision of Three months' extension with same rates, terms and conditions.

4. TERMS OFPAYMENT

4.1 Civil and Architectural works (SOR item Part-1 Civil works no: 1 to 23 except 19, 20)

- a. 90% on completion of work including all supply on pro-rata basis as certified in running bills.
- b. 10% on completion of all activities and their acceptance. Submission of final documents, final bill and acceptance of these by owner thereafter for successful closure of work order.

4.2 Structural works (SOR item Part-1 Civil works no: 19, 20 and 24)

- a. 45% on supply and acceptance of material at site.
- b. 45% on fabrication, erection, alignment, welding, painting, etc.
- c. 10% on completion of all activities and their acceptance. Submission of final



documents, final bill and acceptance of these by owner thereafter for successful closure of work order

4.3 Electrical –Instrumentation works (SOR item Part-2 Electrical no: 1 to 33)

- a. 40% on supply of items.
- b. 40% on installation/erection.
- c. 10% on commissioning and testing.
- d. 10% on completion of all activities and their acceptance. Submission of final documents, final bill and acceptance of these by owner thereafter for successful closure of work order.

5 PRICE REDUCTION SCHEDULE

Time is the essence of the CONTRACT. In case the CONTRACTOR fails to complete the WORK within the stipulated period, then, unless such failure is due to Force Majeure as defined in Clause 26 here above or due to EMPLOYER's defaults, the Total Contract price shall be reduced by ½ % of the total Contract Price per complete week of delay or part thereof subject to a maximum of 5 % of the Total Contract Price, by way of reduction in price for delay and not as penalty. The said amount will be recovered from amount due to the Contractor's Contract Performance Security payable on demand. The decision of the ENGINEER-IN-CHARGE in regard to applicability of Price Reduction Schedule shall be final and binding on the CONTRACTOR. All sums payable under this clause is the reduction in price due to delay in completion period at the above agreed rate.



STANDARD CONDITIONS OF SCC: PART II

Compliances under various Labour Laws

Annexure-i

The Contractor has to fully comply with all applicable Labour Laws and Regulations passed, modified and notified from time to time by the Central, State and Local Government agencies/authorities. Specific attention of the Contractor is drawn to the following obligations amongst others:

1. The Minimum Wages Act, 1948, Payment of Wages Act, 1936 and Payment of Bonus Act 1965 or The Code on Wages, 2019 (after it comes into force)

1.1. Minimum Wages:

- a. During the tenure of the contract, the Contractor must ensure the payment of minimum wages, as notified by the Central Government or State Government whichever is higher, as per the provisions of the Minimum Wages Act, 1948 / Code on Wages, 2019 (after it comes into force).
- b. **Wage period and monthly wages**: Wage period shall be monthly and wages for a month shall be calculated by multiplying daily rate of Minimum Wages by 26. The monthly wages include the wages of the weekly days of rest as applicable to the office/establishment of GGPL. Deduction in case of any days of absence other than weekly days of rest shall be calculated using the following formula:

Deduction for absence = days of absence x (monthly wages / number of days in the relevant month)

However, in case the resource has worked for less than 7 working days in a particular month, the payment of wages is to be made as per the actual number of days worked based on notified wage rate per day.

Illustration I (05 days per week working pattern):

Sl. No.	Month	Nos. of days in the month	Nos. of weekly off	Nos. of days absence	Nos. of days present	Daily wage as notified	Monthly wage	Deduct ion	Wage to paid
1	Feb.	28	8	2	18	603	15678	1119.8 6	14558.14
2	March	31	10	5	16	603	15678	2528.7 1	13149.29
3	April	30	8	10	12	603	15678	5226	10452.00



Illustration II (06 days per week working pattern):

Sl. No	Mont h	Nos. of days in the mont h	Nos. of weekl y off	Nos. of days absenc e	Nos. of days presen t	Daily wage as notifie d	Monthl y wage	Deducti on	Wage to paid
1	Feb.	28	4	2	22	603	15678	1119.86	14558.1 4
2	March	31	5	5	21	603	15678	2528.71	13149.2 9
3	April	30	4	10	16	603	15678	5226	10452.0 0
4	May	31	5	-	4	603	2412	0	2412.00

1.2. Payment of Wages:

The Contractor shall disburse monthly wages through cashless transaction only, and avoid illegitimate deductions and maintain records /returns as prescribed. The Contractor shall be solely responsible for the payment of wages and other dues to the resources, if any, deployed by him latest by 7th day of the subsequent month as per the provisions of the Payment of Wages Act, 1936 / as applicable under Code on Wages, 2019 (after it comes into force) in the presence of Engineer In-charge (EIC) or authorized representative of GGPL. After disbursement of wages, the representative of the Contractor and EIC/ authorised representative of GGPL have to certify the payment of wages to the resources and sign the Wage Register - Form B (under The Ease of Compliance to Maintain Registers under various Labour Laws Rules, 2017) / FORM-I of Code on Wages, 2019 (after it comes into force) with specific seal detailing name/designation/Company.

1.3. Payment of Bonus:

Contractor shall ensure payment of bonus as per the provisions of the Payment of Bonus Act, 1965 / Code on Wages, 2019 (after it comes into force). Present minimum rate of payment of Bonus as per the Payment of Bonus Act, 1965 is 8.33% of minimum wages per month or 8.33% of Rs. 7,000/- per month whichever is higher. The rate shall be subject to amendments made from time to time to the legislation.

Payment of Bonus / ex-gratia (if Bonus is not applicable) shall be made preferably before Deepavali festival falling after the end of relevant financial year(s) and the balance payment at the time of closure of contract.



The amount towards the payment of bonus/ex-gratia shall be released / reimbursed to the contractor, after submission of proof of payment.

2. Leaves/ Leave with wages/ Holiday:

The Contractor shall comply with all the applicable leave Rules including leave with wages in terms of applicable labour legislations i.e. Factories Act, 1948 / Shops & Establishment Act/ *Industrial Establishment (national & festival holidays, casual & sick leave) Act*, 1965.

The Contractor shall extend the leave with wages and maintain the Register of Leave pertaining to the resource deployed. The payment towards un-availed leave, as per the Factories Act, 1948 / Shops & Establishment Act, shall be settled with the resource at the time of closure of the contract or separation of resource from the contract by the contractor.

- i. As per the **Factories Act, 1948** (**if applicable**):- Annual Leave with Wages @ 01 day for every 20 days of work performed by him in the previous calendar year becomes due.
- ii. As per the **Shops & Establishment Act (if applicable)**: Privilege Leave not less than 15 days and Sickness/Casual Leave not less than 12 days (this provision may vary from state to state).
- iii. As per the Industrial Establishment (national & festival holidays, casual & sick leave) Act, 1965 (if applicable): (a) three national holidays of one whole day each on the 26th January, 15th August and 2nd October (b) five other holidays on any of the festivals specified in the Schedule appended to this Act. (c) Every worker shall in each calendar year, be allowed by the employer 07 casual leave and 14 sick leave in such manner and on such conditions as may be prescribed (This provision may vary from state to state).

3. The Employees' Provident Fund & Miscellaneous Provisions Act 1952

- a) The Contractor shall have independent PF code no. with the RPFC as required under the Employees' PF & Misc. Provisions Act, 1952.
- b) The Contractor has to ensure compliance (as per prevailing rates) and extend benefits under the Employees' Provident Fund Scheme 1952, the Employees' Pension Scheme 1995 & the Employees' Deposit Linked Insurance Scheme, 1976 to the resources deployed by him.
- c) The Contractor is required to submit copies of *separate e-Challans / ECR alongwith proof of payment/receipt* in respect of resources engaged through this contract only, on monthly basis. Common challans would not be acceptable in GGPL. The Contractor should submit copies of previous months EPF e-Challans / ECR alongwith current month's bill. The TRRN. No. of the ECR would be verified online from EPFO portal by the Engineer-in-charge to confirm the status of payment and names of the resources deployed.



- d) <u>PF is mandatory irrespective of the number of resources deployed</u> by the Contractor under this contract. <u>PF membership and deposit of PF contribution is also mandatory even if the wage payment to the resource is exceeding the prescribed monthly wage ceiling (i.e. Rs. 15,000/-) under the Employees' PF & Misc. Provisions Act, 1952 and in such case the liability of the Contractor towards PF contribution shall be limited to the prescribed monthly wage ceiling notified from time to time (i.e. Rs. 15,000/- currently).</u>
- e) In case, the Contractor deploys any "International Worker", the Contractor should also make compliance under para 83 of EPF Scheme, 1952 i.r.o the "International Workers" and must register on the *International Worker Portal of EPFO*.

4. The Employees' State Insurance Act, 1948 (If applicable and as per prevailing rates)

- a) The Contractor shall have his own ESI code No. allotted by Employees' State Insurance Corporation (ESIC) as required under the Employees' State Insurance Act, 1948.
- b) The Contractor has to arrange **Smart Cards** (i.e. **ESI Identity Card**) /e-Pehchan **Card** for the resource(s) engaged by him from the Corporation.

5. The Employees' Compensation Act 1923 (wherever applicable)

In case, the work place is out of the notified coverage area under ESIC i.e. ESIC is not implemented in the area **or** in case of excluded employees under ESIC, the Contractor is required to take Employee Compensation / Workmen Compensation Policy from IRDAI approved Insurance Company taking into consideration the **maximum compensation liability** as per provisions of Employees' Compensation Act, 1923. It must be ensured that the contractor/contracting firm should extend coverage to the contract workers through Employee Compensation Policy, to meet the **Compensation Liability** under **Employee's Compensation Act, 1923** along with **Medi-claim Policy** within the overall premium @ 3.25 % of Minimum wages (i.e. employer contribution towards ESI).

6. Group Personal Accident Insurance Policy

The Contractor is required to take a Group Personal Accident Insurance Policy with coverage of **Rs. 3 Lakhs** per resource for the entire period of contract covering all resources deployed under the contract.

7. The Payment of Gratuity Act, 1972

In case of Death or permanent disablement of a resource during execution of work under the contract, the Contractor has to pay the Gratuity as per the provision under the Payment of Gratuity Act, 1972 to the nominee(s) of the resource as per the details



maintained in the duly signed Nomination Form maintained by the Contractor. The proof of disbursement may be submitted to the EIC for claiming reimbursement of amount paid towards death Gratuity from GGPL.

8. The Contract Labour (R&A) Act, 1970

- a) The Contractor is required to obtain Labour license under the provisions of the Contract Labour (R&A) Act, 1970 from the office of Licensing Officer, Central Labour Authority, Ministry of Labour and Employment, Govt. of India having jurisdiction of the Region.
- b) The Contractor shall discharge obligations as provided under the Contract Labour (R&A) Act, 1970 rules and regulations framed under the same and enforced from time to time.
- c) The Contractor shall ensure regular and effective supervision and control over the resources deployed for which a supervisor / representative of the Contractor should be available at all the times for giving suitable direction for undertaking the Contractual Obligations.
- d) The Contractor is solely responsible for payment of wages to each resource deployed by him and such wages shall be paid before the expiry of such period as may be prescribed.
- e) It shall be the duty of the Contractor to ensure the disbursement of wages to resource(s) through e-banking/digital mode. In case the resource does not have a bank account, the disbursement of wages may be made in cash in the presence of the Engineer-in-charge / authorized representative of GGPL initially and Contractor shall simultaneously arrange for opening the bank account of each contract labour deployed by him.
- f) In case, the Contractor fails to make payment of wages and deposit of PF contribution within the prescribed period or makes short payment of wages / short deposit of PF contribution, then GGPL, as Principal Employer, will make payment of wages in full or the unpaid balance due, as the case may be, to the resource(s) deployed by the Contractor and deposit the PF contribution with PF authorities. Such amounts will be recovered from the Contractor either by deduction from any amount payable to the Contractor under any contract or as a debt payable by the Contractor.
- **9.** The contractor is required to comply with all applicable labour laws and regulations including, but not limited to the following:
 - a) The Factories Act, 1948 / The Shops & Establishment Act, 1948 (which ever applicable)
 - b) The Maternity Benefit Act, 1961
 - c) The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1979 & Building and Other Construction Workers Welfare Cess Act, 1996
 - d) The Inter State Migrant Workmen (RECS) Act 1979 (if applicable)
 - e) Contract Labour (R&A) Act-1970



- f) Employees' Provident Fund & Misc. Provisions Act- 1952
- g) Employees' State Insurance Act-1948
- h) Employees' Compensation Act, 1923
- i) Payment of Gratuity Act, 1972
- j) Minimum of Wages Act,1948
- k) The Payment of Wages Act, 1936
- 1) The Payment of Bonus Act, 1965



STANDARD CONDITIONS OF SCC: PART III

Responsibilities of the Contractor

Annexure- ii

- 1. The Contractor shall be solely responsible and indemnify GGPL against all charges, dues, claim etc. arising out of the disputes relating to the dues and employment of resources, if any, deployed by him.
- 2. The Contractor shall indemnify GGPL against all losses or damages, if any, caused to it on account of acts of the resource(s) deployed by him.
- 3. The Contractor shall indemnify GGPL from all claims, demands, actions, cost and charges etc. brought by any court, competent authority / statutory authorities against GGPL.
- 4. The Contractor shall also indemnify GGPL for any action brought against him for violation, non-compliance of any act, rules & regulation of center / state / local statutory authorities.
- 5. All resources deployed by the Contractor are deemed to be on the rolls of the Contractor.
- 6. **Age**: No resource below the age of **18 years** and above age of **58 years** shall be deployed by the contractor for the execution of the contract.

7. Appointment/Nomination of supervisor:

As a part of the contract, the Contractor is required to appoint/nominate a supervisor (s) who will supervise, control and give directions to the resource(s) for discharging the contractual obligations. Accordingly, the Contractor has to give in writing the name and contact details of the supervisor (s) to the EIC. A copy of the same is also to be sent to HR In-charge and Security In-charge for records.

- 8. A copy of the Letter of Acceptance (LOA) should be submitted to the Security Department by the Contractor / his representative or supervisor for facilitating the movement of resource(s) including machine & materials involved in the contract.
- 9. The resources to be deputed/ deployed by the Contractor shall observe all security, fire and safety rules of GGPL while at the site/work. All existing and amended safety / fire rules of GGPL are to be followed at the work site by the Contractor and his deployed resource(s).
- 10. **Personal Protective Equipment / Safety Kit and Liveries**: Contractor shall ensure adequate supply of personal protective equipment / Safety Kit and Liveries as mentioned in the Scope of Work to all such resources deployed.



- 11. In case of accident, injury or death caused to the resource(s) while executing the Work under the contract, the Contractor shall be solely responsible for payment of adequate compensation, insurance money etc. to the next kith & kin of injured / diseased. Contractor shall indemnify GGPL from such liabilities.
- 12. The Contractor shall not deploy any resource suffering from any contagious or infectious disease. The Contractor shall get the deployed resource(s) examined from a civil Govt. Doctor.
- 13. No resource(s) or representatives of Contractor (including Contractor) are allowed to consume alcoholic drinks or any narcotics within the premises of GGPL (including Plant, Office and Residential etc.). If found under the influence of above, the Contractor shall immediately replace that resource(s) with intimation to the EIC.
- 14. While engaging / deploying the resources, the Contractor is required to make efforts to provide opportunity of employment to resources belonging to **Schedule Caste**, **Schedule Tribe** and **Other Backward Class** in order to have a fair representation of these sections of the society.
- 15. The Contractor is required to maintain all Registers and other records in an **office** within the premises of GGPL or at a place **within a radius of three kilometers**.
- 16. Contractor shall provide proper **Employment cards** (**FORM XII**) for the resource to be deployed by him, duly signed by the Contractor or authorized person on behalf of Contractor.

17. Gate/ Entry Pass or Authorization:

Entry to the premises of GGPL is restricted and is subject to appropriate entry authorization in the prescribed format of a Gate Pass or any other entry authorization w.r.t police verification as per instruction of Security department from time to time. Similarly, entry for material/ equipment's/ tools/ tackles etc. is restricted & subject to entry authorization by security department.

- 18. The Contractor shall issue **Identity cards** in his firm's name to the resource deployed.
- 19. Discipline of the resource(s) during discharge of duties must be regulated by the Contractor himself or by his representative.

20. Police verification

- a) The Contractor (including his sub-Contractors/Petty Contractors etc, if allowed) will undertake police verification in respect of the resource(s) engaged by him in GGPL's premises. Such verification will have to be carried out from concerned police station of their permanent place of residence/present place of residence.
- b) Further, the Contractor is advised not to deploy any resource having past criminal record in the establishment/premises of GGPL under this contract awarded to him.



- c) In the event of violation of above clauses at (a) and (b), the Contractor will be solely responsible for the same.
- d) If any such resource(s) having criminal record is deployed by the Contractor in the premises of GGPL and has come to the notice of GGPL at any point of time, the Contractor shall immediately replace that resource(s), failing which that particular resource(s) of the Contractor will not be allowed to enter into the premises of GGPL.
- 21. While confirming to any of these conditions, the Contractor must ensure that all applicable Laws of State regarding labour, their welfare, conduct etc. are complied.



STANDARD CONDITIONS OF SCC: PART IV

Annexure- iii

Compliance of Government of India Directives

1. Pradhan Mantri Suraksha Bima Yojna (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojna (PMJJBY)

Contractor shall, ensure that all its resources deployed under this contract have obtained additional insurance coverage under the Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) through the participating banks and submit the proof of such insurance coverage to the satisfaction of GGPL. The cost has been included in the estimate mentioned in SOR and the Contractor shall submit evidence / proof to GGPL in this respect. Both the schemes are to be regulated continuously on yearly basis and the same should be renewed on each successive relevant date in subsequent years during the period of the contract.

2. Labour Identification Number (i.e. LIN) Registration (Mandatory)

The Unified Shram Suvidha Protal, developed by Government of India, facilitates reporting of Inspections & submission of Returns and has also been envisaged as a single point of contact between employer, resources and enforcement agencies bringing in transparency in their day-to-day interactions. For integration of data among various enforcement Agencies, the Contractor, as an inspectable unit, is required to register and obtain Labour Identification Number (i.e. LIN) from Shram Suvidha Portal and submit the same in GGPL.

3. Pradhan Mantri Rojgar Protsahan Yojna (PMRPY) – if applicable

In order to support the Govt. of India's Initiative on Employment Generation, the Contractor must register for Pradhan Mantri Rojgar Protsahan Yojna (PMRPY) Scheme. The Contractor shall inform GGPL/Engineer in Charge about the benefit availed, if any, against the scheme for adjustment against the invoice(s) / bill(s).



STANDARD CONDITIONS OF SCC: PART V Records and Registers

Annexure-iv

1. Maintenance of records and registers

The Contractor is required to maintain statutory records and registers for applicable labour laws as prescribed under the following rules:

- a) Ease of Compliance to Maintain Registers under the various Labour Laws, 2017
- b) Rationalization of Forms and Reports under Certain Labour Laws Rules, 2017
- c) Labour Codes (after they are made effective by Government of India)
- **2.** The Contractor has to maintain the following (but not limited to) Registers/ Forms/ Reports / Returns at all times:
 - a) Employee Register in FORM A (to be replaced by FORM IV of Code on Wages-2019 after it comes into force)
 - b) Wage Register in FORM B (to be replaced by Register of Wages, Overtime, Fine, Deduction for damage and Loss in FORM I of Code on Wages-2019 after it comes into force)
 - c) Register of Loan / Recoveries in FORM C
 - d) Attendance Register in FORM D
 - e) Register of rest/leave/leave wages in FORM E
 - f) Copies of Wage Slips in FORM XIX (to be replaced by FORM V of Code on Wages-2019, after it comes into force)
 - g) Copies of Employment Card in FORM XII

3. Documents to be submitted by the Contractor to EIC at various stages during the currency of the contract

a) Immediately after issuance/receiving of Letter of Acceptance (LOA)

- Details as required for issuance of FORM VII (Notice of Commencement of Work)
- ii. Application for issuance of **FORM –III** (**Form of Certificate by Principal Employer**) for obtaining Labour License from Licensing Authority for engaging 20 or more resources.
- iii. Copy of **FORM VI** (**License**) before commencement of work if 20 or more resources are engaged.
- iv. Copy of **Provident Fund Registration Certificate** issued by concerned Regional Provident Fund Commissioner.
- v. Copy of **ESI Registration Certificate** issued by concerned ESIC.
- vi. Copies **Insurance Policy(ies)** as mentioned at **Annexure-iv**
- vii. Copy of Labour Identification Number (i.e. LIN) Registration done in Shram Suvidha Portal of Govt. of India.

b) At the time of submission of monthly bills



- i. Copy of Employee Register in FORM A under The Ease of Compliance to Maintain Registers under various Labour Laws Rules, 2017 (to be replaced by FORM IV (of Code on Wages-2019, after it comes into force).
- ii. Copy of Wage Register in FORM B under The Ease of Compliance to Maintain Registers under various Labour Laws Rules, 2017 (to be replaced by Register of Wages, Overtime, Fine, Deduction for damage and Loss in FORM I of Code on Wages-2019, after it comes into force) duly certified by <u>authorized representative</u> of the Contractor and <u>authorised person</u> in GGPL certifying as "Certified that the amount shown in the column No. ---- has been paid to the workman concerned in my presence on-----(date) at ------(place)" along with copy of bank statement duly certified by bank as proof of Cashless Transaction / Payment of wages through e-banking/digital mode.
- iii. As a part of compliance and proof of depositing Provident Fund, EDLI and ESI contributions the Contractor shall submit copies of the *Separate eChallans / ECR*, bank receipts/bank statement in respect of resources deployed in GGPL in the previous month in this contract. The documents should also contain details of resources, PF account No., ESI No., contributions of resources and employer etc.
- iv. Dully filled in details as per Annexure- i.
- v. Copy of Wage Slips in FORM XIX

c) At the time of closure of contract

- i. **Indemnity Bond** of Rs. 100/- duly notarized from Notary indemnifying GGPL from all liabilities w.r.t. the resource engaged by the Contractor regarding payment of wages, Provident Fund/ESI contributions, Insurance and other statutory payments. Format for Indemnity Bond is enclosed at *Annexure- ii*.
- ii. Copy of the **Wage Register** in **FORM B** (to be replaced by FORM-I of Code on Wages-2019 after it comes into force) for the last month.
- iii. Copies of Service Certificates issue to resource in FORM VIII
- iv. Copy of the ECR related to EPF and ESIC Compliance in respect of Resource.
- v. Details as required for issuance of **FORM VII** (**Notice of Completion of Work**)
- vi. Copies of FORM-C & FORM –D under the Payment of Bonus Act 1965 as proof of payment towards Bonus.
- vii. Copy of proof towards release of Leave Encashment
- viii. Copies of No Dues Certificate from contract workers stating they have received all statutory payments and social benefits.

4. Verifications of bills and documents submitted by the Contractor

Before certifying/verifying the running/ final bill/invoice of the Contractor, the designated EIC of the respective contract of GGPL, shall verify from the ECRs of PF/ESI, through respective web portals, the detail/status of the payment made by the Contractor. In case the information furnished by the Contractor is found to be incorrect, GGPL shall take appropriate action against the Contractor under relevant conditions as available in the tender document.





SECTION VII SCHEDULE OF RATES (SOR)



SCHEDULE OF RATES

Item No.	Description	Unit	Qty.	Unit Rate in (Rs.)	Total Amount in (Rs.)
			A	В	C=A*B
PART	- I : CIVIL WORKS	_			
1.00	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 Sq.m on plan but upto depth of 3.0m) including dewatering of both ground and surface water in all season, removal of slurry generated while excavation and keeping the area free of water with necessary shoring, strutting required for keeping earth in position etc. and packing cavities (wherever required) including disposal of excess excavated earth and stacking of required excavated earth, for all leads and lifts, Excavated portion to be neatly rammed, leveled, dressed & compacted to receive bed concrete. Carting away excess excavated earth / debris as directed by the project manager outside the premises to any place designated by the local authority from site by mechanical transport. (Approval of location of disposal from local authority to be in scope of contractor.)	-			
1.10	All kinds of soil	Cum	25		
1.20	same as above but beyond 3.0m in depth	Cum	10		
2.00	CEMENT CONCRETE	-			
	Providing and laying in position ready mixed plain cement concrete below foundation & flooring, trenching and mass concrete, coping etc. including shuttering ,curing with all leads and lifts as per direction of the Engineer - in - charge.	-			
2.10	PCC 1:2:4 (1 Cement: 2 Coarse sand: 4 Stone aggregate 20mm nominal size)	Cum	5		
2.20	PCC 1:4:8 (1 Cement: 4 Coarse sand: 8 Stone aggregate 20mm nominal size)	Cum	2		
3.00	REINFORCED CEMENT CONCRETE	-			
	FORMWORK	-			



3.10	Providing Centering and shuttering including strutting, propping etc. and removal of form work for all level.	-		
3.20	For Foundations, footings, base of columns, plinth Beam etc.	Sqm	20	
3.30	Suspended floors, roofs, landings, balconies and access platform ,lintels etc.	Sqm	60	
3.40	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	25	
4.00	STEEL REINFORCEMENT	-		
4.00	Supply and placing in position Steel reinforcement TMT grade Fe415/Fe500 for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete at all levels. Item also include the provision of necessary chairs and spacer and cost of binding wire etc. complete. The chairs and spacer bars provided will not be measured for payment.	-		
4.10	Thermo-Mechanically Treated bars	MT	1	
5.00	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work in super structure such as coloums, beams, walls, etc. cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads and at all levels, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS: 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in charge. Cement content considered in this item is 330 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately.	-		
5.10	For all works upto plinth level	Cum	2	
5.20	For all works above plinth level upto floor v level	Cum	5	



	CC BLOCK work	-		
6.0	Brick work with bricks of class designation 5.0 with Mortar 1:6 (1Cement: 6 Coarse sand) in all levels.	Cum	10	
	FLOORING	-		
7.0	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS: 15622, of approved make, in approved colours, laid on 20 mm thick cement mortar 1:4 (1 Cement: 4 Coarse sand), including grouting the joints with white cement and matching pigments etc., complete.	sqm	3	
8.0	Providing and laying vetrified floor tiles in different sizes with water absorption less than 0.08% and confirming to IS 15022 of approval make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigmnets etc., complete size of tile 600 X 600 mm.	sqm	10	
9.00	FINISHING	-		
9.10	12 mm cement internal plaster on walls of all heights at all levels in perfect line and level	Sqm	40	
9.20	6 mm cement plaster of mix :	-		
	1:3 (1 cement : 3 fine sand) in ceiling in perfect line and level at all levels	Sqm	10	
9.30	15mm thick Cement plaster 1:6 (1Cement : 6 coarse Sand) outer walls	Sqm	0	
9.40	Painting with APEX / Weather shield make exterior paint with one coat of primer and two or more coat of approved paint on new work wherever required to achieve even shade and colour for all heights and levels	Sqm	50	



10.00	ALUMINIUM WORK	-			
	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge.	-			
	Anodised alumunium (anodised as per IS:1868 of required shade and coating as per AC-15)	-			
10.1	For fixed portion such as frame etc.	Kgs	50		
10.2	For shutter of door window etc.	Kgs	50		
11.0	Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade 1 Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge.	-			
11.1	Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side	Sqm	5		
12.00	Providing & fixing colour coated aluminium hardware fittings with approved quality and shade as per IS specifications/as approved by Consultant to woodwork with cadmium plated MS screws, suitable sockets in masonry/concrete surface if required including all bye-works complete as per specification, drawing and instruction of Consultants (fittings shall not be paid separately in composite items which specify inclusions of fittings)				
	a) Butt hinges (extruded section 125 mm x 75 mm x 4 mm)	Nos	10		
	b) Tower bolts (with barrel & bolts of extruded section -				
	(i) 200 mm x 10 mm	Nos	2		



	c) Sliding door bolts including locking arrangement (aldrop)			
	(i) 250 mm long x 16 mm dia rod	Nos	2	
	d) Grip handle without back plate of approved IS brand			
	(i) 125 mm long	Nos	2	
13.00	e) floor stopper of double type for door shutters up to 40 mm thick			
	(i) rubber - double type	Nos	2	
14.00	Providing and laying 10-40mm well graded granular stone aggregate for wet mix macadam as base course compacted thickness 135mm done in two layers (each layer compacted from 200 mm to 135 mm) including all materials, labours, plant and machinary includinng all lead and lift, loading, unloading, transporting, stacking, spreading to line, level gade and camber, compacting, watering etc., complete with vibratory roller compactor 8 to 10 tonne to attain 98% of max. dry density	Cum	25	
15.00	WATER SUPPLY & SANITARY	_		
	Providing and fixing PVC water tank of approved make with ISI mark and conforming to IS 12701 and with GI fittings for inlet, outlet, over flow, scour float valve, connections of required size and dia. Including connections and hoisting/fixing the same tank on roof and other places at all heights with all bye-works complete at all leads and lifts as per drawings, specifications and instructions of the Engineer In-charge. (Support of tank on brick/RCC/PCC will be paid under relevant items)	-		
15.10	a) 1000 litres capacity	Nos	1	



16.00	Providing and fixing white glazed vitreous china European water closet with ISI mark - Studio type with cistern (EWC) of superior quality 81cm high, double trap syphonic pattern, 'P' or 'S' trap, with low level cistern with cover with siphon and standard flush fittings, plastic seat cover & lid of superior approved quality, CP brass bar hinges, screws, bolts, rubber, buffers 15mm dia PVC inlet pipe connection and CP brass angle stopcock, fixing EWC to floor with floor trap for waste water and necessary brass screws, all complete at all leads and lifts as per manufacturer's specifications and instructions of the Engineer-Incharge.	Nos	1	
17.00	Supplying, fabricating and laying UPVC pipes BS 5255 including collars, bends and specials, taking out waste water and soil waste from toilets to the nearest gully trap or inspection chamber including the cost of all material, labour, leads & lifts, transportation, taxes, duties, all as per specifications, drawings and directions of the Engineer-In-charge.	1		
17.10	a) 75 mm dia	RM	20	
17.20	b) 110 mm dia	RM	10	
17.30	c) 160 mm dia	RM	10	
18.00	Supplying, fitting and laying upvc solvent weld plumbing pipe conforming ASTM D-1785 with all necessary fittings such as bends, tees, elbows, reducers, unions, nipples, plugs, clamps, fixtures, etc., in masonry / concrete works etc., complete at all leads and lifts as per drawings, specifications and instructions of the Engineer-In-charge.	-		
18.10	a) 50 mm nominal bore	RM	15	
18.20	b) 40 mm nominal bore	RM	15	
18.30	c) 32 mm nominal bore	RM	50	
18.40	d) 25 mm nominal bore	RM	20	
18.50	e) 20 mm nominal bore	RM	15	
18.60	f) 15 mm nominal bore	RM	15	



19.0	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-In-charge. The cost of structural steel and PCC shall be paid separately.	-		
19.1	Made of G.I. wire of dia 4 mm	Sqm	20	
20.00	Supplying, Fabricating & Erecting in position steel structures fabricated out of MS Girders, channels, Tees, angle, flats, plate, square hollow sections pipes etc. conforming to IS:2062 and/or from pipes conforming to IS:1161 for structural purpose for cascade supporting structure, loading/unloading platform, Gratings for platform, catladder,handrails, hoardings for sinages,Lcv stand, etc. of any size/dia for required design including cutting, welding, bolting, hoisting, fixing in position, including application of one coat of primer at shop and second coat of primer at site after erection and two coats of finishing paint at site. The work is to be completed in all respect as per specification, scope of work, detailed construction drawings and directions of the Engineer-in-charge. [Rate to include cost of all labour, nut, bolts, tools, tackles, hire charges royalties, levies, transportation, scrap value, gas cutting, welding, other consumables, paints, compressed air, water, electric power etc. all complete.]	Kgs	200	
21.00	SOAK PIT AND SEPTIC TANK	-		
21.1	Providing and construction of septic tank in brick masonry and base and top slab in RCC M25 complete in all respect as per scope of work, detailed construction drawings, technical specifications and directions of the Engineer-in-charge.	Nos.	1	
21.2	Making soak pit with 2.5 m diameter 3.0-metre-deep with 45 x 45 cm dry brick honey comb shaft with bricks and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design. With class 7.5 bricks	Nos.	1	



22.00	BORE WELL			
	Boring, drilling the borewell of 6.5 inch dia with casing/strainer pipe of approved make by suitable method prescribed in IS:2800 (P-I) with 300 mm dia PVC outer casing pipe till required depth including labour, hire and running charges of all equipment, tools, plants, machineries& fittings required for the job, supply and fixing required capacity submersible pump of approved make with electrical cabling &accessories,flushing & development of borewell, providing borewell water and yield test reports etc all complete as per direction of the Engineer.			
	a) Drilling in all type of strata upto 100 Mtr depth.	RM	100	
	b) Supplying and fixing in position in borewell UPVC casing pipe 7inch dia as per IS:12818 at all depths including fittings, accessories etc.	RM	50	
	c) Supplying and fixingin position Submersible pump of required capacity with electrical cables, fittings, fixtures etc3HP, 30 Stage Motor 259 to 702 feet: Head Ra 1440 to 4320 ltrs/hrs: F 4" OD, 1.25" Delivery Single Phase	Nos.	1	
23.0	Pre-Cast Compound wall construction- 3 metres: Column size of 150 X 150 mm with 3 mm HT steel 7 Pcs & height of the column shall be 3 metre from the ground level with M25 grade of concrete, holes should be provided for fensing purpose and plank size is 1 feet with 2" thick and 8 Pcs of 3mm HT steel (Horizonatal-4, Vertical-4) with M25 grade of concrete. which includes excavation 2' X 3' for column foundation, column erection, concrete filling, alignment and also bottom of the wall shall be covered with P.C.C-1:2:4.	RM	100	



24.0	Providing and fixing concertina coil fencing with punched tape concertina coil 600mm dia 10metre openable length(total length 90m) having 50 nos. rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4 m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal including necessary bolts or G.I. barbed wire tied to angle iron all complete as per direction of Engineer-in-charge with reinforced barbed tape (RBT)/ Spring core (2.5mm thick) wire of high tensile strength of 165 kg/sq.mm with tape (0.52 mm thick) and weight 43.478 gm/metre. (cost of M.S. angle, C.C.blocks shall be paid separately)	RM	100	
Part-2	Electrical Works			
1	Supply and installation of 7/18 (6 Sq.mm), Two Core, PVC Insulated Aluminium Conductor Sheathed Weather Proof Service Wire WPTC	m	35.00	
2	Supply and installation of PVC Coated GI Wire, 4mm	m	35.00	
3	Supply and installation of 32A, 230V, Porceline Fuse Set	No.	1.00	
4	Supply and installation of 32A Neutral Link	No.	1.00	
5	Supply and installation of Wooden Board for mounting of Energy Meter and Fuse carrier	Set	1.00	
6	Supply and installation of 1200mm sweep Ceiling fan including suitable down rod. 5 star energy rated.	No.	1.00	
7	Supply and installation of 20W, 4 Feet, LED Tube Light, Cool Day Light	No.	2.00	
8	Supply and installation of 10W, B22 LED Bulb,900lm, Cool Day Light	No.	1.00	
9	Supply and installation of B22 Bulb holder	No.	1.00	
10	Supply and installation of 150mm Sweep Exhaust fan, single phase, Metallic body having bird screen mesh with mounting bracket.	No.	1.00	
11	Supply and installation of following sizes of PVC Pipe			
11.a	19 mm NB	m	24.00	
11.b	25 mm NB	m	12.00	



12	Supply and installation of Street lighting pole 6mtr high GI octagonal pole complete with bracket, GI clamps for fixing flame proof Junction Box, and other accessories.	Set	6.00	
13	Supply and installation of FLP Junction box for Street lighting pole with 2A MCB and Terminal block for terminating Loop in & Loop Out cable.	Set	6.00	
14	Supply and installation of 100W Flame proof street light Ex-d type fixture with LED lamps, control gear in die cast alluminium alloy enclosure and toughened glass cover with all accessories. The enclosure shall be of IP: 66 suitable for Zone 1& 2 gas group IIA & IIB similar to Baliga model FLPW-1095.	Set	6.00	
15	Supply and installation of 12 modular GI box with modular plate and cover in front on surface or in recess, including the following i. 6A Piano switches - 6 No. ii. 3 Pin Socket 6A, 2 in 1 - 2 No. iii. Fan regulator - 1 No.	Set	1.00	
16	Supplying and installation of 2 modular GI box with modular plate and cover in front on surface or in recess, including the following i. 6A Piano switches - 2 No.	Set	1.00	
17	Supply and installation of 6A, Modular Ceiling Rose	No.	4.00	
18	Supply and installation of 16A/6A, 5 in 1 socket outlet with safety shutter along with 16A Piano switch in modular type box	No.	1.00	



19	Supply and Installation of 230V AC Single phase distribution board with all accessories. MCBs as follows i. Incomer - 32 Amp, 10kA, DP MCB - 1 No. ii. Outgoing - 16 Amp, 10kA, DP MCB - 3 No. 10 Amp, 10kA, DP MCB - 1 No. 6 Amp, 10kA, DP MCB - 2 No. The panel shall be wall mounted type suitable for indoor installation and have bottom cable entry. Distribution board shall be of sheet steel construction with single door arrangement, standard DB enclosure with appropriate size to accommodate all feeder components.	Set	1.00	
20	Supply and Installation of 230V AC Single phase UPS distribution board with all accessories. MCBs as follows i. Incomer - 16 Amp, 10kA, DP MCB - 1 No. ii. Outgoing - 6 Amp, 10kA, DP MCB - 5 No. 2 Amp, 10kA, DP MCB - 1 No. The panel shall be wall mounted type suitable for indoor installation and have bottom cable entry. Distribution board shall be of sheet steel construction with single door arrangement, standard DB enclosure with appropriate size to accommodate all feeder components.	Set	1.00	
21	Supply and Installation of Earthing pits comprising, 3.5 meter long 50 mm dia. GI pipe electrode, charcoal, salt, GI earthing conductor for interconnecting the electrodes, 6mm thick GI checked plate for cover, GI earth pit marker, erection accessories confirming to IS-3043 and as per technical specification. It shall also include brick masonry chamber and all other civil works.	Set	4.00	



22	Supply and Installation of complete Electronic earthing system with necessary accessories like copper stranded conductor, Cu plates, Cu strips, GI strips, Funnel with wire Mesh GI pipe, PVC conduit, bolts,nuts, concrete chamber with 6mm thick GI checked plate for cover, coke/charcoal, salt & sand etc., as per technical write up, drawings, etc. It shall also include brick masonry chamber and all other civil works.	Set	2.00	
23	Supply, Installation, Testing and Commissioning of 2 KVA, 230V AC, 50Hz, 1 Phase online double conversion AC UPS with 1X100% charger, 1X100% inverter with static and maintenance bypass switch, 1X100% SMF VRLA 12V, 100Ah Batteries 6 nos. (for Battery back-up time of 4 hours) including UPS to battery connecting cables and supporting stand for both UPS and Batteries. Input Power: 240 V AC, 50 Hz,1 phase.	Set	1.00	
24	Supply and Installation of 25x6 GI Earth Strip	m	130.00	
25	Supply and installation of 1.1kV grade XLPE insulated, PVC sheathed ST2, FRLS armoured Cables (conforming to IS:7098 and specification) of following sizes:			
25.a	4C x 4 mm ² 2XWY	m	18.00	
25.b	4C x 2.5 mm ² 2XWY	m	180.00	
26	Supply and Wiring of 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit.	m	60.00	
27	Supply and Wiring of 2.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit.	m	15.00	
28	Supply and installation of 10 sq. mm FRLS PVC insulated copper conductor single core cable (Green Colour Earthing wire).	m	10.00	
29	Supply and installation of 150mm GI cable tray along with all accessories etc.	m	10.00	



30	Supply and installation of 1.1 Kv grade cable FLP, double compression type Brass cable glands as per Tender Specification for the following sizes of cables:				
30.a	4C x 4 mm ² 2XWY	No.	2.00		
30.b	4C x 2.5 mm ² 2XWY	No.	30.00		
31	Supply and installation of 1.1 Kv grade cable with heavy duty crimping type Copper lugs etc. as per Tender Specification for the following sizes of cables:				
31.a	4C x 4 mm² 2XWY	No.	12.00		
31.b	4C x 2.5 mm ² 2XWY	No.	80.00		
32	Supply and installation of Electric Shock hazard charts following including necessary clamp, bolts, rawl plugs etc.	No.	1.00		
33	Supply and installation of Cable route markers, Cast Iron Disc type	No.	15.00		
Total Amount Excl. GST in (Rs.)					
GST @ 18% (Rs.)					
Total Amount Incl. GST @ 18% (Rs.)					

Signature of Authorized Signatory:
Name:
Designation: