

NOTICE INVITING TENDER

FOR

DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I)

AT BARAUNI, BIHAR

NIT NO.: PNPM/5003/E/102

PREPARED AND ISSUED BY



PROJECTS & DEVELOPMENT INDIA LTD. (A Govt. of India Enterprise) PDIL Bhawan, A-14, Sector-1, NOIDA-201301, U.P., India



PROJECTS & DEVELOPMENT INDIA LIMITED

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LETTER INVITING BID

NIT NO. : PNPM/5003/E/102

SUBJECT: DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR

WORKS (PACKAGE-I) AT BARAUNI, BIHAR

(OPEN DOMESTIC COMPETITIVE BIDDING)

Dear Sir(s),

Projects and Development India Limited (PDIL), hereinafter referred to as CONSULTANT on behalf of Hindustan Urvarak & Rasayan Ltd. (HURL), hereinafter referred as OWNER, has the pleasure of inviting eligible bidders to submit Bid ONLINE through Central Public Procurement (CPP) Portal in Single Phase Two Bid System, for the subject Project in compliance with the NIT. The entire set of Bidding documents is also placed on the website at HURL Website www.hurl.net.in, PDIL website www.pdilin.com, and CPP Portal http://eprocure.gov.in/cppp/.

BRIEF SCOPE OF WORK:

The Scope of Work consists of the Execution / Land Development / Boundary Wall Repair / Demolition / Dismantling within / outside the battery limits of existing plant for proposed Ammonia-Urea Complex at Barauni, Bihar.

Scope of Work includes providing all labour, materials except if indicated in Schedule of Rates, supervision, scaffolding, construction equipment, tools, tackles and plants, supplies, transportation, all incidental items though not indicated or specified, but reasonably implied or necessary for successful completion of the work including Contractor's supervision strictly in accordance with the "Good for Construction" Drawings to be supplied progressively by the Owner/ Consultant, "Technical Specifications" and "Schedule of Rates" of this Tender on Item Rate basis. Sampling & testing of material & equipment shall be done as per relevant clauses of BIS & shall not be paid extra. The contractor shall preferably establish a laboratory at site for all relevant site test as per BIS requirements. The nature of work shall generally involve earth work in grading and levelling of the site area by excavation and filling with available / imported selected good earth under desired compaction, dewatering, shoring, strutting, etc disposal of excavated surplus earth/ materials, breaking, concreting including reinforcements and formwork, fabrication and construction of reinforced cement concrete columns, slabs, beams. The work also includes dismantling and/or demolishing of existing PCC/RCC, flooring, plastering, brick masonry, any sort of roofing with water proof treatment works including stacking separately service- able and disposal of unserviceable materials & rebuilding as per requirements. Scope also includes preparation of Bar Bending Schedule for the reinforcements including getting them Approved from the Owner/ Consultant.

The complete works associated with the Demolition, Land Development & Boundary Wall Repair Works (Package-I) at Barauni, Bihar consists of mainly but not limited to the followings.

- 1) Land Development
- 2) Demolition above & below ground of Existing Structures (RCC & Steel) / Brickwork / Electrical / Mechanical Items etc.



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3) Repair of Boundary Wall

NIT Document consists of:

SECTION-A : COMMERCIAL PART SECTION-B : TECHNICAL PART

SALIENT FEATURES OF NIT:				
1.	NIT NO.	PNPM/5003/E/102		
2.	Issue Date	09.08.2017		
3.	Last Date & Time for Submission of Technical & Commercial Bid and Priced Bid (ONLINE through CPP)	30.08.2017, at 12:00 hrs. (IST)		
4.	Date & Time of opening of EMD and Technical and Commercial Bid	31.08.2017, at 14:30 hrs. (IST), at PDIL, Noida		
5.	Earnest Money Deposit (EMD)	Rs.34,00,000.00 (Rupees Thirty Four Lakhs only)		
6.	Submission of EMD, in Original, at PDIL Noida	On or before Bid Submission Date i.e. 30.08.2017		
7.	Address for Communication with			
7.1	Projects & Development India Limited (PDIL)	Projects & Development India Limited, Project Management Department P.D.I.L Bhawan, A-14, Sector-1, Noida, India		
		Kind Attention: Mr. Sumit Kumar Project Manager Tel no.: 0120-2544063, Extn. 374 Fax no.: +91-120-2529801 E-mail: sumit.kumar@pdilin.com		
7.2	Hindustan Urvarak & Rasayan Limited (HURL)	Hindustan Urvarak & Rasayan Ltd., Core-2, 2 nd Floor, Scope Minar, Laxmi Nagar District Centre, Delhi-92		
		Kind Attention: Mr. Manish Goyal Senior Project Manager Tel no.: 011-22502267 Email: goyalm@hurl.net.in		
7.3	Contact Person for Site visit	Contact Person: Mr. K K Singh Senior Project Manager, HURL Fertlizer Plant (FCI), Barauni Mob.: +91-9771365937 E-mail: singhkk@indianoil.in		



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8.4	NIT overview on websites	Complete Tender documents are available at the following websites:
		HURL (www.hurl.net.in) PDIL (www.pdilin.com) CPP Portal (www.eprocure.gov.in)

The bidder shall submit the bid ONLINE through Central Public Procurement (CPP) Portal. However, Earnest Money Deposit (EMD) and Integrity Pact, in original, shall be submitted at PDIL, Noida on or before Bid Submission Date.

OWNER / CONSULTANT reserve the right to accept/reject any or all Bids without assigning any reason whatsoever.

Bids complete in all respects should reach on or before the Bid Due Date and time. **Bids through Fax / E-mails will not be accepted**. OWNER / CONSULTANT take no responsibility for delay, loss or non-receipt of Bid sent by post/courier. Please be noted that all the dates mentioned herewith are firm and OWNER/CONSULTANT expect strict adherence since this is a priority project.

Transfer of Bidding Document is not permissible.

Bidder may depute their representative with proper authorization letter to attend Technical and Commercial opening of bids.

Eligible bidders are requested to confirm their intention, within seven (07) days from the placement of NIT at CPP Portal, to participate in subject bidding through a letter or fax message.

Thanking you,

For & on behalf of Projects & Development India Ltd.

SUMIT KUMAR PROJECT MANAGER



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NIT NO. : PNPM/5003/E/102

NIT DESCRIPTION : TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL

REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR.

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ATTACHMENT-3	SPECIAL CONDITIONS OF CONTRACT
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EXHIBIT-2	FOR FINANCIAL CRITERIA
ANNEXURE	
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ANNEXURE-1.2	COMMERCIAL QUESTIONNAIRE
ANNEXURE-1.3	EXCEPTION/DEVIATION
ANNEXURE-1.4	DETAILS OF SIMILAR WORKS EXECUTED
ANNEXURE-1.5	CURRENT COMMITMENTS OF THE BIDDER
ANNEXURE-1.6	DEPLOYMENT SCHEDULE OF SUPERVISORY PERSONNEL
ANNEXURE-1.7	DEPLOYMENT SCHEDULE OF CONSTRUCTION EQUIPMENT / DECLARATION FOR MINIMUM DEPLOYMENT OF CONSTRUCTION EQUIPMENTS
ANNEXURE-1.8	DETAILS OF EQUIPMENT PROPOSED TO BE USED FOR TENDERED WORK
ANNEXURE-1.9	CONTENTS OF BID AND CHECK LIST
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ANNEXURE-1.11	PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY DEPOSIT (EMD)
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ANNEXURE-1.16	DECLARATION BY THE BIDDER REGARDING BIDDING DOCUMENT
ANNEXURE-1.17	FORM FOR INTEGRITY PACT
ANNEXURE-1.18	PROFORMA OF SOLVENCY CERTIFICATE
ANNEXURE-1.19	FORMAT FOR EFT DETAILS
ANNEXURE-1.20	GENERAL GUIDELINES FOR GOODS & SERVICE TAX (GST)
ANNEXURE-1.21	FORMAT FOR FINANCIAL CAPABILITY OF BIDDER



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SECTION-A COMMERCIAL



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SECTION-A: COMMERCIAL

ATTACHMENT - 1.0

INSTRUCTIONS TO BIDDERS

0	08.08.2017	FOR TENDER	SK	KJ	RRK
REV.	DATE	PURPOSE	PREPARED	REVIEWED	APPROVED

FORM NO: 02-0000-0021F1 REV3



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1.0 INTRODUCTION

- 1.1. Government of India has formed a joint venture company of M/s. National Thermal Power Corporation Ltd. (NTPC), M/s. Coal India Limited (CIL), M/s. Indian Oil Corporation Ltd. (IOCL) & FCIL/HFCL by name M/s Hindustan Urvarak & Rasayan Ltd. (HURL) hereinafter also referred to as "OWNER", for setting up a brown field Ammonia Urea Complex along with its associated offsite & utility facilities at existing fertilizer complex of HFCL, Barauni, in the State of Bihar.
- 1.1.1 Projects & Development India Ltd. (PDIL) has been retained as Consultant for providing Engineering Consultancy Services and Project Management Services for the aforesaid project.
- 1.1.2 The Scope of Work consists of the Execution / Land Development / Repair of Boundary Wall / Demolition / Dismantling within / Outside the battery limits of existing plant for proposed Ammonia-Urea Complex at Barauni, Bihar.

1.2 LOCATION OF THE PROJECT SITE

The existing Barauni Fertilizer unit of Hindustan Fertilizer Corporation Ltd. (HFCL) is located in the Begusarai district of Bihar. Broad gauge Railway Station (Barauni) is at a distance of 0.8 km from the plant site. The Barauni Refinery of IOCL lies adjacent to the fertilizer plant. The plant is well connected by rail and road. National Highways No. 31 passes nearby. The nearest airport is at Patna about 100 km from Barauni.

2.0 SCOPE OF PROPOSAL

The Scope of Work consists of the Execution / Land Development / Repair of Boundary Wall / Demolition / Dismantling within / outside the battery limits of existing plant for proposed Ammonia-Urea Complex at Barauni, Bihar.

Scope of Work includes providing all labour, materials except if indicated in Schedule Of Rates, supervision, scaffolding, construction equipment, tools, tackles and plants, supplies, transportation, all incidental items though not indicated or specified, but reasonably implied or necessary for successful completion of the work including Contractor's supervision strictly in accordance with the "Good for Construction" Drawings to be supplied progressively by the Owner/ Consultant, "Technical Specifications" and "Schedule of Rates" of this Tender on Item Rate basis. Sampling & testing of material & equipment shall be done as per relevant clauses of BIS & shall not be paid extra. The contractor shall preferably establish a laboratory at site for all relevant site test as per BIS requirements. The nature of work shall generally involve earth work in grading and levelling of the site area by excavation and filling with available / imported selected good earth under desired compaction, dewatering, shoring, strutting, etc disposal of excavated surplus earth/ materials, breaking, concreting including reinforcements and formwork, fabrication and construction of reinforced cement concrete columns, slabs, beams. The



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The complete works associated with Package-I at Barauni, Bihar consists of mainly but not limited to the followings:

- 1) Land Development
- 2) Demolition above & below ground of Existing Structures (RCC & Steel) / Brickwork / Electrical / Mechanical Items etc.
- 3) Repair of Boundary Wall

REFER SECTION-B, TECHNICAL PART FOR DETAILED SCOPE OF WORK

3.0 **BIDDING DOCUMENTS**

The bidder is expected to examine the bidding documents, including all instructions, Pre-Qualification Criteria, Forms, Annexures, Terms and Conditions of Contract, Specifications, Drawings and other documents and to fully familiarize itself with the requirements of the bidding documents. Failure to furnish all the information required by the Bidding Documents or the submission of a bid not substantially responsive to the Bidding Documents in every respect may result in the rejection of the Bid.

In case of any inconsistency, in the interpretation of meaning of any part of this Tender Documents, the BIDDER shall give his best endeavor to resolve the inconsistency by expressing his assumption through his proposal to OWNER.

AMENDMENT OF BIDDING DOCUMENTS 4.0

Bidders shall examine the Bidding documents thoroughly and inform the OWNER of any apparent conflict, discrepancy or error.

At any time prior to the deadline for submission of bids as well as upto priced bid opening, the OWNER may, for any reason whether at its own initiative or in response to a clarification or modification requested by any prospective Bidder(s), modify the Bidding documents, if required.

Notice of issuance of any Amendment to the bidding document (Corrigendum/Addendum/Amendment) if any, shall be hosted on PDIL website and shall not be advertised in press. The same shall also be notified in the websites of any one or more of the JV companies comprising HURL (viz. IOCL, NTPC, CIL & FCIL/HFCL). Bidders are therefore advised to visit the website regularly for downloading the details of amendment to bidding document. The Bidders will be required to acknowledge notification of any such amendment to the Bidding documents. Bidders shall confirm the inclusion of Addendum/Corrigendum in their bid and shall follow the instructions issued along with addendum/corrigendum



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In order to afford Bidders reasonable time to take the amendment, issued prior to submission of Bids, into account in preparing their Bids, OWNER may, at its discretion, extend the deadline for the submission of Bids.

5.0 LANGUAGE OF THE BID

The Bid prepared by the Bidders and all correspondence and documents relating to the Bid exchanged by the Bidder and the CONSULTANT/ OWNER shall be written in the English language and all units shall be in Metric system. Any printed literature furnished by the Bidder may be written in another language, provided that such literature is accompanied by an English translation, in which case, for purpose of interpretation of the Bid, the English translation shall govern.

6.0 TIME SCHEDULE

6.1 Bidder shall be required to complete the WORK under the CONTRACT in accordance with the following:

Project Completion Date	06 Months from Effective Date of Contract

- The "Effective Date of Contract" shall be the date of issuance of LOI (Letter of Intent) by the Owner.
- 6.3 The basic consideration and essence of the Contract is the strict adherence to the time schedules for performing the specified works as stipulated in the Contract.

7.0 SIGNATURE ON BIDS

- 7.1 The Bid must contain the name, designation and place of business of the person or persons making the Bid and must be signed and sealed, on each page, by the Bidder with his usual signature. The names of all persons signing should also be typed or printed below the signature. The Bidder shall submit authority letter / Power of Attorney / Board Resolution in favour of the authorized signatory(s) of the Bid. The Bidder's name stated on the proposal shall be the exact legal name of the Bidder.
- 7.2 Bids by bodies corporate/ limited Companies must be signed with the legal name of the Corporation/Limited Company by the President, Managing Director or by the Company Secretary or any other person or persons holding Power of Attorney for signing their Bid.
- 7.3 In case of a Single Bidder, Power of Attorney issued by the Board of Directors / CEO / MD / Company Secretary of the Bidder/ all partners in case of Partnership Firm / Proprietor in favor of the authorized employee(s) of the Bidder, in respect of the particular tender for signing the Bid and all subsequent communications, agreements, documents etc. pertaining to the tender and to act and take any and all decision on behalf of the Bidder, is to be submitted.

The authorized employee(s) of the Bidder shall be signing the Bid and any consequence resulting due to such signing shall be binding on the Bidder.



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- 7.4 Bid shall contain no cuttings, erasures or overwriting except as necessary to correct errors made by the Bidder in which case each such corrections or other changes in the Bid documents shall carry the initials of the person(s) signing the Bid.
- 7.5 Bids not conforming to the above requirements of signing may be disqualified.

8.0 PRE-QUALIFICATION CRITERIA (PQC)

Evaluation of Technical and Commercial offers shall be carried out for only those Bidders who shall meet the Pre-qualification Criteria.

8.1 **TECHNICAL CRITERIA**

- 8.1.1 BIDDER must have satisfactorily completed the similar works listed below during last 07 (Seven) years ending last day of the month previous to the one on which NIT is invited. As a documentary proof, the bidder shall submit attested photo copies of the following documents-
 - Copy of Work Orders with full technical details including Detailed Scope of the Work i. and Completion Period.
 - ii. Completion Certificate from End User/OWNER regarding satisfactory completion indicating the period of completion.
- The Bidder, meeting the requirements as per clause 8.1.1 above, must have executed 8.1.2 Similar Works* during last seven (07) years ending last day of the month previous to the one on which applications are invited, should be either of the following:

One completed Work with contract value not less than INR 13.60 Crore OR

Two completed Works each works with contract value not less than INR 8.50 Crore OR

Three completed Works each works with contract value not less than INR 6.80 Crore

*Similar Works means : Land Development, Civil, Structural Works in field of Oil / Gas / Refinery / Power / Petrochemicals / Fertilizers / Railways / Highways and Other Industrial Plants.

To meet the criteria (8.1.1) above, Bidder shall submit documentary proof such as Copy of Work Order / relevant Extract of Work Order and Completion / Acceptance Certificate. The Completion/Acceptance Certificate shall clearly indicate the LOI / Work Order no., Name of Work, Contract Value, Scope of Work, Contract period and actual Date of Completion.

For clause 8.1.1 and 8.1.2, a Job executed by a Bidder for its own plant/ project cannot be considered as experience for the purpose of meeting PQC of the tender. However, jobs executed for Subsidiary / Fellow subsidiary / Holding company will be considered as experience for the purpose of meeting PQC subject to submission of tax paid invoice (s) duly certified by Statutory Auditor of the Bidder towards payments of statutory tax in



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support of the job executed for Subsidiary / Fellow subsidiary / Holding company. Such Bidders to submit these documents in addition to the documents specified to meet PQC.

8.2 FINANCIAL CRITERIA

- 8.2.1 Average Annual financial turnover during three (03) financial years i.e. 2015-16, 2014-15 and 2013-14 of the bidder meeting the requirement as per clause above experience criteria should be at least **INR 05.10 Crore.**
- 8.2.2 Net Worth of the Company should be positive during financial year ending 31st March 2016.
- 8.2.3 The Bidder will submit Solvency certificate not more than six months old from the date of issue of NIT from their Banker for a value not less than **INR 6.80 Crore** or minimum credit ratings of "A" from ICRA/CRISIL etc OR equivalent reputed institutions, OR financing/credit limits from bank of value not less than **INR 6.80 Crore** valid as on date of issue of NIT.

To meet the criteria (8.2.1 & 8.2.2) above, bidder shall submit Audited Annual Statements (Balance Sheet and Profit & Loss account) of the company for three (3) financial years i.e. 2015-16, 2014-15 and 2013-14.

8.3 AUTHENTICATION OF ALL DOCUMENTS SUBMITTED AGAINST PQC

All documents in support of Technical criteria of PQC to be furnished by the bidders shall necessarily be:

Duly certified / attested by Notary Public with legible stamp

In support of Financial criteria of PQC, bidder is required to submit following

Shall submit "Details of Financial capability of Bidder" in prescribed format (as per Annexure-1.21), duly signed & stamped by a Chartered Accountant.

Further, a copy of Audited Annual Financial Statements submitted in bid shall be duly certified / attested by Notary Public with legible stamp

Note: The Authentication of PQC Documents of the Bidders Qualified after Technocommercial (unpriced) Evaluation shall be checked through Original documents.

9.0 [DELETED]

10.0 EARNEST MONEY DEPOSIT (EMD)

10.1 Bids must be accompanied with 'Earnest Money Deposit (EMD) / Bid Security' in the form of 'Demand Draft' or 'Banker's Cheque' or 'Bank Guarantee'. The amount of EMD shall be as indicated in the LIB (Letter Inviting Bid). The Bidder shall furnish as part of his Bid, EMD in the form of a Bank guarantee.



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- 10.1.1 In case EMD is submitted in form of BG, then the EMD offered shall be an irrevocable Bank Guarantee, issued by any scheduled nationalized bank on a non judicial stamp paper of appropriate value, on a stamp paper of appropriate value. Proforma of the Bank guarantee is enclosed as Annexure-1.13
- 10.1.2 The Bank Guarantee shall be valid for a period of three (3) months beyond validity of the Bid. The amount shall be as indicated in the Letter Inviting Bid for this NIT. The Bank Guarantee shall be extended suitably if there is a delay in awarding the contract. The relevant extension shall be on Bidders' account.

OR

EMD can also be furnished in the form of Demand Draft in favour of M/s. Hindustan Urvarak & Rasayan Limited, payable at Delhi for value as outlined in the Letter Inviting Bid for this NIT.

EMD will not carry any interest.

10.1.3 Bidders shall submit their EMD along with Integrity Pact, in Original, at following address.

The envelope shall be super scribed with:

"DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR."

PROJECTS & DEVELOPMENT INDIA LTD. (A Govt. of India Enterprise) PDIL BHAWAN, A-14, SECTOR-1, NOIDA-201301, BIHAR, (INDIA)

Kind Attention: Mr. Sumit Kumar, Project Manager

Tel no.: +91-120-2544063. Extn. 374

EPBX No. + 91-120-2529842 / 43 / 47 / 51 / 53 / 54

Fax no. + 91-120-2529801 / 91 E-mail: sumit.kumar@pdilin.com

The EMD along with Integrity Pact, in Original, must be submitted on or before the opening of Technical and Commercial Bid as indicated in the NIT.

- 10.2 Any Bid not accompanied with EMD shall be rejected by the OWNER/CONSULTANT as being non-responsive.
- The EMD of unsuccessful Bidders will be returned by OWNER/CONSULTANT without any 10.3 interest to the unsuccessful Bidders as promptly as possible on acceptance of Bid of the successful Bidder or when the Bidding process is cancelled by OWNER/CONSULTANT, whichever is later. Where EMD has been paid by demand draft, the refund thereof shall be in the form of demand draft in favour of the unsuccessful Bidder(s). Bidders may indicate the name and address in whose favour the said demand draft shall be drawn by the OWNER/CONSULTANT for refund failing which it shall be drawn in the name of the Bidder and shall be mailed to the address given on the Transmittal Letter.



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- 10.4 The successful Bidder's EMD will be discharged upon the Bidder accepting and signing the Contract and furnishing the Security cum Performance Bank Guarantee.
- 10.5 The EMD shall be forfeited and appropriated by OWNER/CONSULTANT in regard to the NIT without prejudice to any other right or remedy to OWNER under the following conditions:
 - a) If a Bidder withdraws his Bid during the validity or extended validity period.
 - b) If the bid is varied or modified in a unilaterally by the bidder during the validity or extended validity period.
 - c) Any effort by the bidder to influence the Owner on bid evaluation, bid comparison or contract award decision.
 - d) In the case of a successful Bidder, if the Bidder fails to duly sign the CONTRACT within the stipulated timeframe, and/or meet the stipulations for signing the CONTRACT within the said timeframe.

OR

If the successful bidder is seeking modifications to the agreed terms and conditions after issue of Letter of Award ("LOI") and prior to signing of the Contract.

If the successful bidder fail to furnish Security cum Performance Bank Guarantee within 30 days of issuance of the LOI.

11.0 **COST OF BIDS**

The Bidder shall bear all costs associated with the preparation and submission of the Bid, and OWNER / CONSULTANT will, in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

12.0 MODIFICATION AND WITHDRAWAL OF BIDS

- 12.1 The Bidder may modify or withdraw its Bid after the Bid's submission, but before the last date and time of Bid submission as specified in this NIT provided that written notice of the modification or withdrawal is received by OWNER/ CONSULTANT prior to the deadline prescribed for submission of Bids.
- 12.2 A withdrawal notice may also be sent by E-mail in signed and scanned form not later than the deadline for submission of Bids.
- In case any clarifications are sought by the OWNER/CONSULTANT after opening of 12.3 tenders, then the replies of the Bidder should be restricted to the clarification sought. Any modification of a Bid by the Bidder (including a modification which has the effect of altering the value of the said Bid) after opening of Technical and Commercial Bids without specific reference by the OWNER shall render the Bid liable to be rejected without notice and without further reference to the Bidder.
- 12.4 No bid may be withdrawn in the interval between the deadline for the submission of bids and the expiration during the validity or agreed extension validity period duly agreed by the bidder. Withdrawal or unsolicited modification of a bid during this interval shall result in the Bidder's forfeiture of its EMD.



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13.0 INFORMATION REQUIRED WITH THE BID

- 13.1 All technical information shall be furnished as per Section-B, Technical. In addition, the bidder shall ensure that Technical and Unpriced Commercial Bid has been submitted.
- 13.2 Requirement of Manpower / Equipment / Tools & Tackles for timely completion of the project
- 13.2.1 Bidder shall furnish tentative month wise manpower requirement till completion of the job.
- 13.2.2 Bidder shall also furnish a tentative break up of equipments, tools & tackles for timely execution of job

14.0 **LOCAL CONDITIONS**

- 14.1 It will be imperative on each Bidder to fully make aware himself of all local conditions and factors which may have any effect on the execution of the works covered under these specifications and documents. Bidder shall inspect the site, examine and obtain at its cost and responsibility, all information required and satisfy himself regarding all matters and things such as access to site, communications, transport, right of way, the type and number of equipment and facilities required for the work, availability of local labour. materials and their rates, local working conditions, weather, flood levels, sub-soil conditions, natural drainage, and all information that may be necessary for preparing its Bid, performance of work and other obligations and related matters. By submitting the Bid the Bidder shall be deemed to have acknowledged and agreed that ignorance of the site and other said conditions shall not be basis for any claim for compensation or extension of time or loss of profits etc. and the OWNER shall not be liable on account thereof in any manner whatsoever to the Bidder or any person claiming through or under the Bidder.
- 14.2 Bidders must before submission of their Bids, acquaint themselves with all applicable regulatory and other legal requirements pertaining to insurance and health, safety and environment requirement in INDIA and rules related to work permit and visa requirements in INDIA or in any way or manner affecting the performance of Scope of Work, the Contractor and the Plant operation and performance including social security, safety, pollution control, permits, licenses, and the other statutory requirements and regulations. The submission of a Bid by the Bidder will be construed as evidence that such an examination was made and the Bidder shall not raise at any time later any claims/disputes against the OWNER and the OWNER shall not be liable for the same in any manner whatsoever.

14.3 Deleted

- 14.4 The Owner shall not entertain any request for clarification from the bidder, regarding such local conditions.
- 14.5 The Bidder shall be deemed to have prepared the Bid on the basis of its independent judgment and to have made all necessary allowances and provisions to ensure that the PROJECT will meet all technical specification prescribed hereunder in the tender document and will be entirely suitable for the purpose for which it is intended. Accordingly, at the time of submission the Bid Price will, without extra price and/or extension of time, be held to include everything implicitly or otherwise required or necessary for the proper and timely completion of the WORK in accordance with the CONTRACT. Further, in case of any contract awarded under these specifications and documents, neither any change in



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the time schedule of the Contract nor any financial adjustments arising thereof shall be permitted by the Owner, which are based on the lack of such clear information or its effect on the cost of the works to the Bidder.

14.6 Visit to site is optional and at BIDDER's cost and expense.

15.0 PRICE BASIS & CURRENCY OF BIDS

- 15.1 The Bidder shall quote in Indian Rupees only.
- The Percentage quoted by the Contractor shall be fixed and firm shall be valid until completion of the Contract to be executed with the successful Bidder pursuant hereto and shall not be subject to variation/escalation on any account except as otherwise specifically provided in the Contract documents.
- 15.3 Site is located at Barauni, Bihar, India and the bidder are required to check & confirm before bidding for applicability of taxes & duties for the procurement of supply and service by them for the execution of contract.
- The Bidders shall quote in their proposals, the firm Percentage for the entire scope of work as per Schedule of Prices, (Refer Part-IV of Section-B, Technical), inclusive of all taxes, duties, levies etc. except GST as applicable.
- 15.5 All bank charges of bidders bankers shall be to the Bidder's account and all Bank charges of Owner's bankers shall be to Owner's account.
- 15.6 Income Tax, or any other tax and surcharge as applicable shall be deducted at source from the bills of the contractor and a certificate to that effect shall be issued by the Owner.

16.0 CONSORTIUM BIDS

Joint Venture / Consortium Bids are not acceptable.

17.0 NUMBER OF BIDS

- 17.1 A bidder shall on no account submit more than one bid either directly or indirectly.
- A bidder shall be deemed to have submitted an indirect bid if a subsidiary of the bidder is also a direct or indirect bidder in an independent bid or if the bidder or its subsidiary has with its consent been indicated as a sub-contractor in any other bid or even if not so indicated has entered into any arrangement (whether disclosed or undisclosed) with any other bidder or with a sub-contractor of that bidder for the performance of any work for that other bidder upon an award of the work to that other bidder.
- 17.3 If a bidder makes more than one bid and/or directly or indirectly participates in another bid as contemplated under 17.2 above, all the bids of the bidder, including the bid of the bidder in whose bid the first named bidder has directly or indirectly participated, may be considered as cartel bids and may be rejected. If the factum of such bid(s) is discovered after the notification of award, the resultant contract shall be liable to be terminated pursuant to the provisions for termination contained in the General Conditions of Contract.

18.0 CONFIDENTIALITY OF DOCUMENTS



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Bidders shall treat the bidding documents and contents therein as strictly confidential.

19.0 TAXES AND DUTIES

- 19.1 The rates shall include all taxes & duties, levies etc. including but not limited to custom duty, personnel and corporate tax except GST. GST shall be paid extra at actual.
- 19.2 Bidders are required to ascertain themselves the prevailing rates of custom duty or applicable taxes & duties under GST including income tax rates as applicable on the scheduled date of submission of price bids and Owner would not undertake any responsibility whatsoever in this regard. However, due to any subsequent change in law, liability of the Owner as regards to payment of duties and taxes would be governed by Clause 39.0 of Special Conditions of Contract on subsequent legislation.
- 19.3 Please note that the responsibility of payment of above taxes thereupon lies with the Service Provider only. Contractor providing taxable service shall issue an Invoice as per the law, a Bill or as the case may be, a Challan which is signed, serially numbered and in accordance with GST rules. The invoice shall also contain the following:
 - (a) Name, Address & GST Registration No. of such Person/Contractor
 - (b) Name & Address of the Person/Contractor receiving Taxable Service
 - (c) Description, Classification & Value of Taxable Service provided like HSN/SAC Code.
 - (d) GST Amount & Cess thereupon, if any.

Payments to Service Provider for claiming GST and cess thereupon amount will be made provided the above formalities are fulfilled. Further, HURL may seek copies of challan and certificate from Chartered Accountant for deposit / submission of Return of GST thereupon collected from Owner.

Any changes in statutory rules and regulations under GST regime shall be followed by Contractor.

Refer Annexure-1.20 of Section-A (Commercial) for General Guidelines for Goods & Service Tax (GST)

20.0 BIDDING DOCUMENTS AND DEVIATIONS

20.1 It is expected that bidders will submit bids based strictly on the terms and conditions and specifications contained in the bidding documents and will not stipulate any deviations.

Following are critical provisions and bidders are not allowed to take deviations against these provisions.

- a. Firm Price
- b. Earnest Money Deposit
- c. Specifications & Scope of Work
- d. Schedule of Rates/ Price Schedule / Price Basis
- e. Time / Completion Schedule
- f. Validity of Bid
- g. Payment Terms
- h. Taxes and Duties
- i. Security cum Performance Guarantee
- j. Mutually Agreed Damages



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- k. Guarantees / Defect Liability Period
- I. Limitation of Liability
- m. Settlement of Disputes
- n. Overall Ceiling on Total Liability
- o. Patent Infringement And Indemnification
- p. Arbitration / Settlement Of Dispute
- q. Governing Laws, Language and Measures
- r. Force Majeure
- s. Integrity Pact
- t. Any other condition specifically mentioned in the tender document elsewhere that non-compliance of the clause leads to rejection of bid

The Owner's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence. If a bid is not substantially responsive, it will be rejected by the Owner, and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

Should it, however, become unavoidable, deviations should be separately and specifically stipulated only in the prescribed Annexure-1.3. OWNER/CONSULTANT reserves the right to reject as non-responsive any bid containing major deviation(s).

- 20.2 It is important that Bidder clearly demonstrates his experience and capability, giving OWNER/CONSULTANT a high level of confidence that if awarded, the Bidder will be able to perform the works within the stipulated Time Schedule and quoted rate and meeting all other requirements listed in the Bidding document.
- 20.3 Bidder is requested to furnish the complete and correct information required for evaluation of his Bid. If the information with regard to resources and concurrent commitments or any other information/documentation forming basis of evaluation is found incomplete/incorrect, the same may be considered as adequate ground for rejection of the Bid.
- 20.3 Examination of bids and determination of responsiveness
- 20.3.1 The owner's determination of bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the Owner will determine whether each Bid:-
 - (a) Meets the "Pre-Qualification Criteria" of the Bidding Documents;
 - (b) Has been properly signed;
 - (c) Is accompanied by the required 'Earnest Money;
 - (d) Is substantially responsive to the requirements of the Bidding Documents; and
 - (e) Provides any clarification and/or substantiation that the Owner may require to determine responsiveness pursuant to Clause-20.3.2 of this ITB
- 20.3.2 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 Owner 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.



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- 20.3.3 A material deviation, reservation or omission is one that,
 - (a) If accepted would,
 - i) Affect in any substantial way the scope, quality, or performance of the job as specified in tender documents.
 - ii) Limit, in any substantial way, inconsistent with the Tender Document, the Owner'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.
- 20.3.4 The Owner shall examine all aspects of the bid to confirm that all requirements have been met without any material deviation, reservation or omission.
- 20.3.5 If a Bid is not substantially responsive, it may be rejected by the Owner and may not subsequently be made responsive by correction or withdrawal of the material deviation, reservation or omission.

21.0 SUBMISSION OF BIDS

21.1 The Bid shall be submitted in electronic format (through CPP portal) as per time schedule mentioned in the Letter Inviting Bid.

The Bidder shall submit Bid Security / EMD in physical form only at the address mentioned at Clause 10.0 of Instruction to Bidders

21.2 Instruction for Online Submission of Bid

Instructions to the Bidders to submit the bids online through the Central Public Procurement Portal for e-Procurement at https://eprocure.gov.in/eprocure/app

- Possession of valid Digital Signature Certificate (DSC) and enrolment/registration of the contractors/bidders on the e-procurement / e-tender portal is a prerequisite for etendering.
- 2) Bidder should do the enrolment in the e-procurement site using the "Click here to Enroll" option available on the home page. Portal enrolment is generally free of charge. During enrolment/registration, the bidders should provide the correct/true information including valid email id. All the correspondence shall be made directly with the contractors/bidders through email id provided.
- 3) Bidder need to login to the site thro' their user ID/ password chosen during enrolment/registration.
- 4) Then the Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by SIFY / TCS / nCode / eMudra or any Certifying Authority recognized by CCA India on eToken / SmartCard, should be registered.
- 5) The DSC that is registered only should be used by the bidder and should ensure safety of the same.
- 6) Bidder may go through the NIT / tenders published on the site and download the required NIT documents/schedules for the tenders he/she is interested.



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- 7) After downloading / getting the NIT/ Tender document/schedules, the Bidder should go thro' them carefully and then submit the documents as asked, otherwise bid will be rejected.
- If there are any clarifications, this may be obtained online thro' the tender site, or thro' the contact details. Bidder should take into account the corrigendum published before submitting the bids online.
- Bidder then logs in to the site through the secured log in by giving the user id/ password chosen during enrolment/registration and then by giving the password of the e-Token / Smart Card to access DSC.
- 10) Bidder selects the tender which he/she is interested in by using the search option & then moves it to the 'my tenders' folder.
- 11) From my tender folder, he / she selects the tender to view all the details indicated.
- 12) It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidder should go through the tender schedules carefully and upload the documents as asked otherwise, the bid will be rejected.
- 13) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/schedule and generally, they can be in PDF/xls/rar/zip/dwf formats. If there is more than one document, they can be clubbed together and can be provided in the requested format. Each document to be uploaded through online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through zip/rar and the same can be uploaded, if permitted. Bidders Bid documents may be scanned with 100 dpi with black and white option. However of the file size is less than 1 MB the transaction uploading time will be very fast.
- 14) If there are any clarifications, this may be obtained through the site, or during the pre-bid meeting if any. Bidder should take into account the corrigendum published from time to time before submitting the online bids.
- 15) The Bidders can update well in advance, the documents such as certificates, annual report details etc., under My Space option and these can be selected as per tender requirements and then send along with bid documents during bid submission. This will facilitate the bid submission process faster by reducing upload time of bids.
- 16) Bidder should submit the EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission due date & time for the tender. Scanned copy of the instrument should be uploaded as part of the offer.
- 17) While submitting the bids online, the bidder reads the terms & conditions and accepts the same to proceed further to submit the bid packets.
- 18) The bidder has to select the payment option as offline to pay the Tender Fee/ EMD as applicable and enter details of the instruments.



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- 19) The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise submitted bid will not be acceptable.
- 20) The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.
- 21) The bidder has to upload the relevant files required as indicated in the cover content. In case of any irrelevant files, the bid will be rejected.
- 22) If the price bid format is provided in a spread sheet file like BoQ_xxxx.xls, the rate offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Price Bid / BOQ template must not be modified/ replaced by the bidder; else the bid submitted is liable to be rejected for this tender.
- 23) The bidders are requested to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.
- 24) After the bid submission (i.e. after Clicking "Freeze Bid Submission" in the portal), the acknowledgement number, given by the system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and will also act as an entry pass to participate in the bid opening date.
- 25) The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
- 26) All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not viewable by unauthorized persons during bid submission & not be viewable by any one until the time of bid opening.
- 27) Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 28) The confidentiality of the bids is maintained since the secured Socket Layer 128 bit encryption technology is used. Data storage encryption of sensitive fields is done.
- 29) The bidder should logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the (X) exit option in the browser.



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Note: A bidder shall submit only one bid in the same bidding process. A Bidder who submits more than one bid will cause all their bids disqualified in the said bidding process.

- The Bidder is expected to examine all instructions, forms, terms and conditions in the NIT. The NIT together with all its attachments thereto, shall be considered to be read, understood and accepted by the Bidders, -and except deviations, if any, specifically stated in seriatim by the Bidder. Failure to furnish all information required or submission of a Bid not responsive to the NIT in every respect will be at the Bidder's risk and may result in the rejection of the Bid.
- 21.4 **Pre-qualification Bid and Technical & Commercial Bid** in two Sections, as specified below.

SECTION-I: PRE-QUALIFICATION BID (Refer Clause 8.0)

- i) Letter of submission
- ii) Pre Qualification Criteria in favour of Experience Criteria as per Exhibit-1 along with Copies of Work Orders, Certificates from End User/OWNER and completion certificates in support of prequalification requirement.
- iii) Pre Qualification Criteria in favour of Financial criteria as per Exhibit-2 along with copies of Work Orders, Completion/ Acceptance certificates and Annual audited Report for the last three financial years. Annual Reports shall be a verifiable statement of annual accounts certified by a Chartered Accountant or Public Accountant in the form of printed annual reports or similar document.
- iv) Solvency Certificate from Bidder's bankers as per Annexure-1.18. Date of Issue of this certificate should not more than six months old from the date of issue of NIT.
- iv) A declaration shall be submitted as per Annexure-1.14 to the effect that Bidder have or had not been banned or blacklisted/del-listed by any PSU / Government Organizations.
- v) A declaration shall be submitted to the effect that Bidder submitting their Bid is not under liquidation, court receivership or similar proceedings.

SECTION-II: TECHNICAL AND COMMERCIAL BID

- i) Photocopy of Earnest money Deposit (EMD)
- ii) Tender Acceptance Letter as per Annexure-1.1
- iii) Commercial Questionnaire as per Annexure-1.2
- iv) Exception / Deviation as per Annexure-1.3
- v) Details of Similar Works Executed as per Annexure-1.4
- vi) Current Commitments of the Bidder as per Annexure-1.5
- vii) Deployment Schedule of Supervisory Personnel as per Annexure-1.6
- viii) Deployment Schedule of Construction Equipment as per Annexure-1.7

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- ix) Details of Equipment Proposed to be used for this work as per Annexure-1.8
- x) Contents of Bid and Check List as per Annexure-1.9
- xi) Power of Attorney of Bid Signatory from the Competent Authority
- xii) Declaration by Bidder regarding Bidding Document as per Annexure-1.16
- xiii) Photocopy of Integrity Pact as per Annexure-1.17
- xiv) Bidder to furnish PAN Number, TIN Number, PF/ESI Number, GST Number, Labour Licence Registration Number, Latest Income Tax Clearance Certificate / ITR etc. along with the bid.
- Price confirmation copy A Photocopy of the Schedule of Prices, to be submitted strictly as per Part-IV of Section-B, Technical, prices being blanked out and in place indicating "Quoted" against each head, shall be submitted duly signed and stamped. However, Bidder shall not hide the percentage of taxes and duties considered in the priced bid.
- xvi) Master Index along with a copy of complete set of Bidding Documents of all technical and commercial amendments/addendums if any issued, duly signed and stamped on each page as a token of having received and read all parts of the bidding document and having accepted and considered the same in preparing their bid.

xvii) Exceptions / Deviations

The OWNER/ CONSULTANT wishes to receive fully compliant bids. Exception/Deviations may only be made in relation to requirements of OWNER/ CONSULTANT, which the BIDDER feels unable to comply with under any circumstances or at any price. If the BIDDER wishes to make any exception/deviations, this must be done by listing the full details of each exception/deviation in Annexure-1.3. Unless an entry appears in the list of exception/deviations in Annexure-1.3, OWNER/ CONSULTANT will assume and consider that BIDDER has no exceptions or deviations to the Tender Documents.

Schedule of Deviations (if any) to the commercial and Technical bid documents, shall be submitted separately, as per Annexure-1.3. Also, Technical deviations must be given separately for each discipline.

Note: A soft copy of Annexure-1.3, in editable form, shall also be submitted by the Bidder whenever asked by Owner/Consultant.

xviii) Any other information required in the Bidding Documents or considered relevant by the Bidder.

For convenience, the Bid shall be compiled in the form of Specific Sections conforming to the above. In case of non-submission of above documents or submission of incomplete documents, the OWNER/CONSULTANT reserves the right not to evaluate such offers further and not to enter into correspondence in this regard after opening the Technical and Commercial Bid.

21.5 PRICED BID

21.5.1 Priced Bid shall consist of in the following manner:



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- (i) Preamble to Price Bid.
- (ii) Priced Bid, duly filled in and completed in all respects, as per **Part-IV of Section-B**, **Technical** given in the Bidding Documents.
- 21.5.2 Priced Bid shall be submitted duly signed and stamped on each page. This part shall not contain any condition whatsoever failing which the Bids shall be liable to be rejected. In case of any correction, the bidder shall put its signature and its stamp. Eraser fluid will not be allowed for making any correction.

If the bidder has indicated "Not Applicable/Not Quoted" in the price bid, their bid will liable to be rejected and will not considered for price evaluation. However, if the bidder has indicated "Nil / Blank", it will be consider as "Nil Percentage" and the Estimated Amount will be considered for evaluation and award, in case the bidder becomes successful.

- 21.5.3 Prices must be strictly filled in format for "Schedule of Rates as per Part-IV of Section-B, Technical" enclosed as part of bidding document. If quoted in separate typed sheets and any variation in description, unit is noticed, the bid is liable to be rejected. In any case Bidder shall be presumed to have quoted against the description of work and the same shall be binding on the Bidder.
- 21.6 Bidders shall indicate the PERCENTAGE RATE ABOVE (+) OR BELOW (-) on the Estimated Amount provided in the Schedule of Rates. The Quoted Percentage indicated by the bidder should be strictly quoted as specified in Part-IV of Section-B, Technical otherwise the bid may be rejected.
- 2.7 Bidder is requested to Quote the Percentage (Above or Below) within 2 Decimal places. However, Digits beyond 2 decimal places will be ignored.

22.0 CORRECTION OF ERRORS

Bids determined to be substantially responsive will be checked by the Owner/Consultant for errors.

Errors will be corrected by the Owner/Consultant as follows:

i) In case of any difference in the Quoted Percentage in Figures and in Words, the Percentage Quoted in Words shall prevail.

All other cost shall be derived accordingly and corrected / re-calculated value shall be binding. If the Bidder does not accept the derived corrected value, the Bid will be rejected, and the EMD shall be forfeited.

23.0 DEADLINE FOR SUBMISSION OF BIDS:

- 23.1 Bids must be submitted not later than the time and date as specified in the Letter inviting Bid.
- 23.2 The OWNER/ CONSULTANT may extend this deadline for the submission of Bids by amending the NIT documents in accordance with Clause No. 4.0 above. In such case all rights and obligations of the OWNER and Bidders under this NIT shall be subject to the extended deadline.



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Any bid received after the deadline specified in the NIT or as extended shall be liable to be rejected.

24.0 OPENING OF BIDS

- 24.1 OWNER /CONSULTANT will open Bids in the presence of Bidder's representatives who choose to attend at Date and time specified on cover page of NIT or as informed by OWNER / CONSULTANT. The Bidder's representative(s) present during the Bids opening shall sign a Bids opening record sheet evidencing their attendance.
- The Bidder's name, modifications, Bid withdrawal and the presence or absence of the requisite EMD and such other details, as the OWNER / CONSULTANT at its discretion may consider appropriate, will be announced during Bids opening.
- 24.3 The Bids shall be opened and evaluated in two stages:

24.3.1 STAGE-I: OPENING & REVIEW OF EMD, PRE-QUALIFICATION BID, TECHNICAL AND COMMERCIAL BIDS

On the date of Public Bid opening as indicated on the Letter Inviting Bid of this NIT, cover containing EMD & Integrity Pact shall be opened and reviewed.

The OWNER / CONSULTANT will review the Bank Guarantee (BG) submitted by Bidder against EMD, with respect to:

- a. its value,
- b. validity &
- c. issuing Bank.
- d. the format attached with the tender document.

In case, the Bidder has not submitted the EMD or the BG submitted by the Bidder is not as per the requirement of NIT with respect to the above mentioned parameters, the Bids submitted by them may be rejected.

If the EMD submitted by the Bidder is found to be in order with respect to above mentioned parameters but if there is a minor deviation with respect to the format enclosed with the NIT, the OWNER /CONSULTANT may at its discretion inform the Bidder who shall have to rectify the same before the date of opening of the Price Bid. In case the Bidder fails to rectify the EMD, its Bids will be rejected and the Bidder will be informed to take back its Bid, including the Price Bid.

Thereafter, OWNER / CONSULTANT will open Pre-Qualification Bid, Technical and Commercial Bids of those Bidders, whose EMD is found to be in order as described here above.

OWNER / CONSULTANT will first review Pre-qualification bid. Technical and Commercial Bids shall be evaluated only for those bidders whose bid is found to be Pre-qualified based on the Pre-qualification Criteria.

24.3.2 STAGE – II: OPENING OF PRICE BID

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Before opening the Priced Bid of the technically and commercially acceptable Bidders, if required, a meeting with the Bidders shall be arranged. Date and Venue of such meeting shall be informed at the appropriate time.

The date of the opening of the Price Bid shall be intimated to technically and commercially acceptable Bidders. The price bids of such shortlisted Bidders will be opened in the presence of Bidder's representative who chooses to attend, on the date and time to be intimated. The bidder's name, bid price and such other details as the OWNER at its discretion may consider appropriate, will be announced at the opening of price bids.

The evaluation of the priced Bids shall be done as described under Clause No. 29.0 of the ITB.

24.3.3 If the Bids as judged by the OWNER are unresponsive, the NIT may be declared void and a new procedure for selection of CONTRACTOR as deemed appropriate by OWNER may be adopted.

25.0 POLICY FOR BID UNDER CONSIDERATION

Bids shall be deemed to be "Under Consideration" immediately after they are opened and until such time that the official intimation of award / rejection is made by the OWNER / CONSULTANT to the Bidders. While the bids are under consideration, bidders and/or their representatives or other interested parties are advised to refrain from contacting by any means, the OWNER / CONSULTANT and/or his employees / representatives on matters related to the bids under consideration.

The OWNER / CONSULTANT, if necessary will obtain clarifications on the bids by requesting for such information from any or all the Bidders, either in writing or through personnel contact as may be necessary. The Bidder will not be permitted to change the substance of the bid after the bid had been opened.

26.0 DISCUSSIONS WITH BIDDERS DURING TECHNO- COMERCIAL EVALUATION

After opening of the Bids, to assist in the examination, evaluation and comparison of Bids, OWNER / CONSULTANT may, at its discretion, ask the Bidder for clarification on its Bid. The request for such clarification and the response shall be in writing either through fax or email.

Further OWNER / CONSULTANT may ask BIDDER to visit OWNER's/ CONSULTANT's office for technical, commercial or financial clarifications.

BIDDER is expected to undertake such visits and participate in such meetings as and when called by the OWNER/ CONSULTANT. All costs related to such visits shall be borne by BIDDER.

Consequent upon the discussions, if required OWNER / CONSULTANT may issue final amendment to the bid document. Bidders shall be required to submit their unconditional acceptance to final amendment.

Bidder may be given a chance to furnish supplementary price bid indicating the price implication in view of final amendment, if any. The price implication (positive/negative) shall be given in the Part-IVA of Section-B, Technical. Part-IVA of Section-B, Technical shall be the exact replica of Part-IV of Section-B, Technical, SCHEDULE OF RATES



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super scribed as SUPPLEMENTARY PRICE BID. The same shall be considered for the purpose of evaluation. OWNER/ CONSULTANT's decision in this regard shall be final and binding on the bidders.

After opening of the Price Bid, no change in the quoted rate/price shall be sought, offered or permitted.

27.0 **EFFECT AND VALIDITY OF BID**

- 27.1 The submission of any bid connected with these documents and specifications shall constitute an agreement that the Bidder shall have no cause of action or claim against the OWNER/ CONSULTANT for rejection of his bid. The OWNER / CONSULTANT shall always be at liberty to reject or accept any bid or bids at his sole discretion and any such action will not be called into question and the Bidder shall have no claim in that regard against the OWNER/ CONSULTANT.
- 27.2 The bids should be kept valid for acceptance for a period of 90 Days from the date of opening of Technical and Commercial Bids. A Bid valid for shorter period may be rejected by the Owner as being non-responsive.

Under the exceptional circumstances, prior to expiry of the original Bid validity period, the OWNER/ CONSULTANT may request the Bidder for a specified extension in the period of validity. The request and the responses thereto shall be made in writing or by telefax or by E-mail.

- 27.3 In the event of OWNER/ CONSULTANT seeking extension of period of validity of the Priced Bids, the validity of EMD shall also be suitably extended.
- 27.4 A Bidder agreeing to the request of OWNER/ CONSULTANT seeking extension will not be required nor permitted to modify his bid, and will be required to extend the validity of his EMD correspondingly. However, Bidders request for revision/adjustment of Priced Bid under such circumstances may be considered by the OWNER/ CONSULTANT. The provisions of Clause-10.0 regarding discharge and forfeiture of EMD shall continue to apply during the extended period of Bid Validity.

COMPLETE SCOPE OF SUPPLIES / WORK 28.0

- 28.1 The complete scope of supplies and work/services has been defined in the bidding documents. Only those bidders who take complete responsibility and who bid for the complete scope of supplies and work/services as contained in the bidding document shall be considered for further evaluation subject to meeting Pre-Qualification Criteria.
- 28.2 If the contractor is required to engage a sub-contractor for any part of work, then such subcontractors shall have prior proven experience of similar work and shall require specific approval by OWNER.
- 28.3 If a proposed sub-contractor has been approved by the OWNER, the CONTRACTOR shall not replace such approved sub-contractor with another sub-contractor without obtaining the OWNER's prior approval for the proposed replacement.

EVALUATION AND COMPARISON OF BIDS 29.0

29.1 **GENERAL**



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- 29.1.1 The OWNER wishes to finalise the award of work of the facilities covered under this bidding documents within a limited time schedule. The bidders are advised to submit their bids complete in all respects conforming to all terms and conditions of the bid document.
- 29.1.2 Bids shall be evaluated based on the information / documents available in the bid. Hence bidders are advised to ensure that they submit appropriate and relevant supporting documentation along with their proposal in the first instance itself. Bids not complying with the requirements of Bid Documents are liable to be rejected. Bidders are advised to fill up all Annexures carefully and provide reference to all relevant documents given in their bid offer.
- 29.1.3 Bidders shall indicate the PERCENTAGE RATE ABOVE (+) OR BELOW (-) on the Estimated Amount provided in the Schedule of Rates. The Quoted Percentage indicated by the bidder should be strictly quoted as specified in Part-IV of Section-B, Technical otherwise the bid may be rejected. Any conditional discount offered by the bidder shall not be considered for the purpose of evaluation, however, the same shall be considered for purpose of award.

The comparison shall be on the basis of Total Evaluated Cost derived by Quoted Percentage (Above or Below) in SCHEDULE OF RATES (PART-IV of Section-B, Technical) corrected pursuant to Clause No. 22.0 of the ITB. The Owner's evaluation will also include the costs resulting from application of the evaluation procedures described in ITB Clause 29.2. Any adjustments in price that result from the below procedures as per ITB Clause 29.2 shall be added, for the purposes of comparative evaluation only.

- 29.2 The financial comparison for selection of Lowest (L-1) Bidder / Contractor shall be arrived by using the following methodology:
- 29.2.1 TOTAL EVALUATED PRICE: TOTAL EVALUATED PRICE shall be derived after Multiplying a Factor (i.e. 1 ± Quoted Percentage Rate indicated by the bidder for the items/100) by Estimated Amount plus GST amount to be derived considering GST rate, as indicated by the bidder. The total payment towards GST to be made by the owner under the contract shall be limited to the amount to be derived by considering the GST rate indicated by the bidder in their bid.
- 29.2.2 If two or more bidders emerge as the Lowest evaluated bidders after evaluation, in such an event, Revised Percentage (which should be lower than Original Quoted Percentage) will be sought from those bidders and Re-evaluation will be carried out for selection of Lowest (L-1) Bidder.

30.0 PRICE VARIATION

The Bidder shall quote firm rate in the "Schedule of Rates (Part-IV of Section-B, Technical)". Firm rate shall not be subject to any escalation on any account. Bids with variable prices shall be disqualified.

31.0 REBATE

31.1 No suo-moto reduction in price(s) by Bidders is permissible after opening of the price bid. If any Bidder unilaterally reduces the price(s) / percentage quoted by him in his bid after



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opening of price bids, such reduction shall not be considered for comparison of prices but shall be binding on the Bidder if he happens to be selected for award of work

32.0 CONTACTING OWNER

A Bidder shall not contact the OWNER/CONSULTANT on any matter relating to his bid from the time of priced bid opening to the time that the Contract is awarded, unless requested to do so in writing. Any effort by a Bidder to influence the OWNER/CONSULTANT in the OWNER's/ CONSULTANT's decisions in respect of bid evaluation or contract award will result in the rejection of that Bid.

33.0 AWARD OF CONTRACT

- 33.1 Subject to ITB Clause 35.0, the OWNER will award the CONTRACT to the successful Bidder whose Technical and Commercial bid has been determined to be substantially responsive and Price Bid to be the lowest evaluated Bid, further provided that the Bidder is determined to be qualified to perform the CONTRACT satisfactorily.
- After selection, Letter of Intent ("LOI") as per mode of contracting shall be released by the OWNER to the selected Bidder. The selected bidder will return the duplicate copy duly signed & stamped as token of acceptance within 15 days.
- The Bidder shall enter into a Contract Agreement with the OWNER as per clause 34.0, failing which the Bid Security/EMD is liable to be forfeited.

34.0 SIGNING OF CONTRACT

- 34.1 At the same time as the OWNER notifies the successful Bidder that its Bid has been accepted, the OWNER will send to the Bidder a draft of the Contract provided in the Bidding Documents, incorporating all agreements between the parties.
- Within Fifteen (15) days of receipt of the CONTRACT, the successful Bidder shall sign and date the Contract Agreement and return it to the OWNER. Cost of execution of the Contract, including payment of stamp duty thereon, shall be borne by the Bidder.

35.0 OWNER'S RIGHT TO ACCEPT / REJECT BIDS

- 35.1 The OWNER 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(s) or any obligation to inform the affected bidder(s) of the ground of OWNER's action.
- 35.2 It is observed that many bidders indulge in trading in contracts by entering into undisclosed back-to-back arrangements for the whole or a substantial portion of a CONTRACTOR's obligations under the contract. If a bidder proposes to enter into any such arrangements upon a successful award of work or has in place any such arrangement which will become operative upon the award of work, the bidder must make a complete disclosure of such arrangement or proposed arrangement in its proposal, and all provisions applicable to sub-contractor(s) in terms of bidding documents shall apply to such arrangements.
- 35.3 If the existence of such an undisclosed arrangement is reasonably apprehended by the OWNER in the case of a bidder, the OWNER may reject such bidder's bid as not responsive.



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35.4 If such an undisclosed arrangement is discovered after the award of work, such arrangement(s) shall be deemed to constitute an assignment of contract and a ground of termination pursuant to the provisions of termination under the General Conditions of Contract.

36.0 CONTRACT SECURITY CUM PERFORMANCE BANK GUARANTEE

- As a Contract Security, a successful Bidder, to whom the work is awarded, shall be required to furnish a Security cum Performance Bank Guarantee in the form attached as Annexure-1.12 within thirty (30) days of issuance of LOI. The This Bank Guarantee shall be an irrevocable Bank Guarantee, issued by any scheduled nationalized bank on a non judicial stamp paper of appropriate value. The Bank Guarantee (BG) amount shall be equal to ten per cent (10%) of the TOTAL CONTRACT PRICE and it shall guarantee the faithful performance of the CONTRACT in accordance with the terms and conditions specified in these documents and specifications. The Performance Bank Guarantee shall be valid for a period till Project Completion Date / Preliminary Acceptance of Work by Owner plus Defect Liability period of 12 months plus a claim period of 06 months. In case of breach of contract, BG shall be encashed by the OWNER.
- Failure of the successful Bidder to comply with the requirement of Clause 36.1 hereof shall constitute sufficient grounds for forfeiture of Bid Security/EMD without prejudice to its rights and remedies as set forth in this NIT or otherwise in law.

37.0 GENERAL INSTRUCTIONS

37.1 TRANSFER OF TENDER DOCUMENTS/PROPOSAL

- 37.1.1 Transfer of Bid submitted by one BIDDER to another is not permitted. No alteration in the essence of a Bid, once submitted, shall be permitted.
- 37.1.2 OWNER/CONSULTANT reserves the right to verify all statements/information submitted to confirm the Bidder's claim on experience on the performance of equipment offered and capabilities of the Bidder to perform the Scope of Work. OWNER/CONSULTANT may inspect similar facilities built by the Bidder. Bidder shall co-ordinate and arrange for visit. However all expenses of such visit of OWNER's Officials / OWNER's Representative will be borne by OWNER.
- 37.1.3 OWNER/CONSULTANT shall not entertain any correspondence with any Bidder on acceptance or rejection of any Bid.
- 37.1.4 Oral statements made by the Bidder at any time regarding any matter including quality, or arrangement of the equipment or any other matter will not be considered and will not be binding on the OWNER/CONSULTANT.
- 37.1.5 Standard catalogue pages and other documents of the Bidder may be used in the Bid to provide additional information and data as deemed necessary by the Bidder.
- 37.1.6 Bidder will furnish the Bid with all relevant information's as called for. Bids with incomplete information are liable for rejection.
- 37.1.7 The Bid shall be submitted in line with clause wise compliance of this NIT. Deviation, if any, shall be separately highlighted as per Annexure-1.3.



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- 37.1.8 Any clause which is specifically not covered under Annexure-1.3, will be presumed to have been agreed, unconditionally, by the bidder.
- 37.1.9 If at any later date, it is found that documents, information and data submitted by the Bidder in the Bid, and based on which the Bidder has been considered eligible or successful or has been awarded the Contract is incorrect or false to the extent that had the correct or true information been made available to the OWNER at the time of Bid evaluation, the bid would have been declared ineligible or unsuccessful, the Bidder shall be forthwith disqualified or, as the case may be, the contract awarded based on such incorrect or false information shall be cancelled and the EMD/PBG shall be liable to be forfeited.

38.0 INTEGRITY PACT

Bidders are required to unconditionally accept the "Integrity Pact (IP)", as per Annexure 1.17, (executed on plain paper) and submit the same duly signed on all pages by the bidder's authorized signatory along with the EMD. Bidder's failure to comply with the aforesaid requirement regarding submission of 'Integrity Pact (IP)' shall lead to outright rejection of the Bid and in such case the Bids shall not be opened.

39.0 RATES FOR EXTRA ITEMS

Rates for additional, altered or substituted work shall be determined by the Engineer-in-Charge as follows:-

- a) If the rate for the additional, altered or substituted item of work is not specified in the said schedule of quantities, the rate of that item shall be derived from the rate for the nearest similar item specified therein.
- b) If the rate for any additional, altered or substituted item of work cannot be determined in the manner specified in sub-para (a), then such item of work shall be carried out at the rate entered in the C.P.W.D. Delhi Schedule of Rates, 2016. The contractor to quote the % above or below the rates as mentioned in CPWD Schedule of Rates Delhi 2016.
- c) If the rate for any additional, altered of substituted item of work can not be determined in the manner specified in sub para (a) to (b), the contractor shall within 7 days of the date of receipt of the order to carry out the said work, inform the Engineer-in-charge of the rate which he proposes to Claim for such item of work, supported by analysis of the rate claimed by the rate of labour and materials. In the event of the contractor failing to inform the Engineer-in-Charge within the stipulated period of time and rate which he proposes to claim, the rate for such item shall be determined by the labour and materials and quantum of labour and materials as per actual observation, provided all these elements are justifiable, plus 15% to cover the contractor's profit and over head.
- d) If any altered, additional or substituted item of work ordered comprises of more than one part/sub item and each part/sub item could be priced in different manners according to the principles laid in sub para a to c, the decision of the Engineer-in-Charge as the appropriate principle of pricing applicable to the particular part/sub item shall be final.
- e) No deviation from specifications stipulated in this contract shall be made or additional items of work shall be carried out by the contractor unless the rates of such



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substituted, altered or additional items have been approved in writing by the Engineer-in-Charge failing which Owner shall not be liable to pay any claim on this account.

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SECTION-A: COMMERCIAL

ATTACHMENT - 2.0

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0	08.08.2017	FOR TENDER	SK	KJ	RRK

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ARTICLE-1: DEFINITIONS

In this contract the following words shall have the meaning herein assigned to them respectively.

- a. **i-"Tenderer"** means any person, firm or company invited to submit their tenders; including their authorised representative for the work.
 - **ii-"Bid/Tender"** shall mean offer/proposal/document that the bidder/tenderer submit in the required and specified form in accordance with the provisions of NIT duly signed by the bidder or authorized signatory under the seal of firm document, LOI.
- b. "The Work" means all duties, responsibilities and obligations to be discharged by the Contractor pursuant to the Scope of Work and Technical Specifications mentioned in the contract.
- c. "The Contractor's Equipment" means all machinery, apparatus, materials and equipment to be provided by the Contractor pursuant to the Contract for and in connection with the work but not forming or intending to form a permanent part of Plant.
- d. "Site" shall mean the plants location at Barauni for which this Purchase Order/Contract has been issued and where the Equipment / Works to be erected / executed. The location of plant site is in Barauni, Bihar.
- e. "Date of Completion" means the date specified in the body of the contract hereto or such later date as may be agreed to in writing from time to time by the Owner/Consultant.
- f. "Month' shall mean English Calendar month.
- g. "Contractor" or "Supplier" or "Vendor" shall mean any person, firm or company awarded the work through Letter of Intent and accepted by him/them.
- h. "Purchaser / Owner / HURL" shall mean HINDUSTAN URVARAK & RASAYAN LIMITED (HURL) having their site at Barauni, Bihar, India.
 - "Consultant" shall mean M/s PROJECTS & DEVELOPMENT INDIA LTD (PDIL). having their office at A-14, Sector-1, Noida, Dist.-Gautam Budh Nagar, UP- 201301, India is acting for and on behalf of M/s. Hindustan Urvarak & Rasayan Limited (HURL) (Owner/ Purchaser) for providing Consultancy Services for Demolition, Land Development & Boundary Wall Repair Works (Package-I) at Barauni, Bihar
 - "Engineer-In-Charge" shall mean person designated as such By HURL or his duly authorized representative and includes those who are expressly authorized to act for and on its behalf respectively for operation of the contract and who will be incharge of the works and under whose supervision and direction the work shall be carried out.



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- i. "Principal Rotating Equipment" shall mean those items of equipment comprising of centrifugal compressors, steam turbines, high pressure boilers feed pumps, from 3300 volts electric motors, turbine generator, diesel generator and gear boxes associated with any of these equipment.
- j. "Goods" means all of the Equipment, machinery, and/or other materials which the Supplier/Contractor is required to supply/execute to the purchaser under the Purchase Order/Contract.
- k. "Services" means supervision to installation, commissioning, provision of technical assistance, training and other such obligations of the Supplier covered under the Purchase Order.
- I. "Subcontract" shall mean Order/Contract placed by the Supplier/Contractor, for any portion of the Order or Work, after necessary consent of Owner/Consultant.
- m. "Subcontractor" or "Sub Vendor" or "Sub Supplier"- shall mean any person or persons or firm or their legal representatives, successors, assignees to whom part of Order has been sub-let by the Supplier/Contractor.
- n. "Battery Limit" shall mean the area within which Plant/Equipment are to be located.
- o. "Plant" shall mean entire assembly of the Equipment within specified Battery Limit.
- p. "**Drawings**" shall mean and include Engineering drawings, sketches showing plants, sections and elevations related to the Purchase Order/Contract together with modifications and/or revisions thereto.
- q. "Specifications" shall mean and include schedules, detailed description, statement of technical data, performance characteristics, standards (Indian as well as international) as applicable and specified in the Purchase Order/ Contract.
- r. "Engineer" shall mean the Engineer or Executive-in-charge at Site nominated by Owner/Consultant.
- s. "Inspector" shall mean any person or outside agency nominated or agreed by Owner/Consultant to inspect Equipment stage-wise as well as final inspection, before despatch, at Supplier's/Contractor's work and on receipt at Site as per the terms of the Purchase Order/ Contract.
- t. "**Tests**" shall mean such process or processes to be carried out by the Supplier as are prescribed in the Purchase Order/Contract or considered necessary by Owner/Consultant or their representatives in order to ascertain quality, workmanship, performance and efficiency of Equipment or part thereof.



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- u. "Approval" shall mean and include the written consent, either manuscript, type written or printed statement, under signature or seal, as the case may be, of the Owner/Consultant or their authorized representative on documents, drawings or other particulars in relation to the Purchase Order.
- v. "Work Order/Contract" means the agreement entered into between Owner/Consultant and the Supplier, as recorded in the Purchase Order form, signed by the Owner & accepted by Supplier, including all attachments and Annexure thereto and all documents incorporated by reference therein together with any subsequent modifications thereof in writing.
- w. "Work Order/Contract Price" means the price payable to the Supplier under Purchase Order for the full and proper performance of his contractual obligations.
- x. **"Schedule of rates"** shall mean the rates/percentage quoted by the tenderer with his tender/bid and which have been finally accepted by Owner.
- y. "Effective date of Work Order" shall be the date of Issuance of Notification of Award (Letter of Intent) by Fax/Email unless otherwise agreed.
- z "**Act/code**" shall mean any law, rules, regulations, notification, issued and passed by Central/State or local authority for the time being in force in India.
- z¹. "Completion period" shall mean the period of date on/by which the work shall be completed in all respect as agreed to between Owner and the contractor.

ARTICLE-2: CONTRACTOR'S SERVICES

- a. The Contractor shall supply material under scope and provide, execute, complete and maintain the work in Accordance with the Contract. The contractor shall also perform the services described in various sections of Invitation to Tender.
- b. The contractor undertakes to cooperate with the Consultant/Owner and other contractor's appointed by the Owner for the Plant and agrees to exchange technical information as may be reasonably asked for to obtain most efficient and economical Plant for owner.
- c. The contractor shall be responsible for ensuring that the positions, levels and dimensions of the work are correct according to the Contract notwithstanding that he may have been assisted by the Consultant in setting out the said positions, levels and dimensions. Any discrepancies shall be promptly intimated to the Owner/Consultant for his final decision.
- d. The work to be done under the contract shall be executed with all due diligence and in the manner specified in the Contract and to the satisfaction of the Owner/Consultant. The contractor hereby undertakes that work shall be ready for tests on completion not later than the date of completion.



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- e. The contractor shall carryout all such tests as are specified in the Contract and/or required in accordance with good engineering practices or directed by Owner/Consultant for ensuring the quality and performance of the equipment and materials supplied and work done under the contract at his own cost.
- f. Contractor shall arrange for all handling, safe storage and security of all the equipment/ material issued to him for erection.
- g. Contractor shall arrange all tools, tackles, cranes and other material handling equipment's, welding equipment and cables, welding rods, scaffoldings (metallic only), consumable stores, safety equipment & appliances and all other equipment/accessories required for execution of work including erection and testing. These shall not be removed from the site without the written permission of the Owner.
- h. Contractor shall bear all postage/courier, telephone/fax, telegraph and other communications etc. expenditure during his work at the site.
- I. Contractor shall provide necessary supervisory staff and inspectors, erection engineers, skilled and unskilled labour, clerical staff, watch and ward staff, store keepers, drivers, etc. required in connection with the execution of the contract.
- j. Contractor shall provide all amenities, including but not limited to, accommodation/conveyance to his staff and labour employed by him for the work at the site.

ARTICLE-3: CONTRACT PRICE

- a. The Owner shall pay to the Contractor sum not exceeding to what is set out in the Letter of Intent /Work Order, reduced or increased by such sums (if any) as under the Contract are to be taken into account in ascertaining the Contract Price. The Contractor shall take written permission from HURL for carrying out works beyond stipulated contract value as and when such situation arises.
- b. The contractor shall credit the Owner with the sums which may become allowable or due under the Contract at the times and in the manner hereinafter specified.
- c. The prices shall be fixed for the duration of the contract and shall not be subject to escalation of any description including extension of time, if any granted by owner on any ground, what-so-ever it may be.

ARTICLE-4: OWNER'S REPRESENTATIVE/CONSUTLANT

- a. All instructions and orders to the Contractor shall, except as herein otherwise provided, be given by the Owner through his nominated representative(s).
- b. All the work shall be carried out under the direction of and to the satisfaction of the Owner/Consultant.



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- c. The contractor shall proceed with the work in accordance with decisions and orders given by Owner/Consultant in accordance with the contract provided that:
- i. If the contractor being given any decision, instruction or order other than in writing and if the contractor without any undue delay require it to be confirmed in writing, such decision, instruction or order shall not be effective until written confirmation thereof has been received by the contractor, and
- ii. If the contractor after receiving any decision, instruction from the Owner/Consultant in writing or written confirmation thereof, intimates within fourteen days any dispute or questions the decision, instruction, or order by written notice to the Owner/Consultant giving his reasons for so doing, either party shall be at liberty to refer the matter to arbitration pursuant to Article-35 hereof, but such an intimation shall not relieve the contractor of his obligations to proceed with the work in accordance with the decision, instruction, or order in respect of which the intimation has been given.

ARTICLE-5: CONTRACTOR TO INFORM HIMSELF FULLY

The contractor shall be deemed to have carefully examined the specifications, schedules and drawings and also to have satisfied himself as to the nature and character of the work to be executed and, the Site conditions and other relevant matter in detail, before entering in to the contract. No claim whatsoever, if subsequently made in this regard, shall be entertained by the owner/consultant.

ARTICLE-6: FINANCIAL GUARANTEE FOR SECURITY AND PERFORMANCE

- A) The Contractor shall provide the Owner with the financial guarantee for the due and faithful performance of the contract for a sum equal to 10% (ten percent) of the contract value or the sum as defined in the body of the contract. Such guarantee shall be in the form of a Bank Guarantee from any Scheduled/ Commercial Bank recognised by Reserve Bank of India on the format attached herewith. Contractor shall inform the Owner/Consultant name and address of its banker along with Fax Number and E-Mail.
 - The Bank Guarantee shall be furnished within 15 days of placement of letter of intent and shall be valid until expiry of the maintenance period referred to in Article 31.
- B) For increase of 20% in contract value, performance guarantee originally submitted shall remain valid. For increase beyond 20% additional guarantee to cover total increase from original contract value shall be submitted by the contractor.
- C) The validity of performance guarantee shall be suitably extended in accordance with final date of completion of work plus 12 months maintenance period from the date of certified final completion of work plus 6 months (claim period).



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D) The proceeds of performance security shall be appropriated by the Owner/Consultant as compensation for any loss resulting from the Supplier's/Contractor's failure to complete its obligations under the Purchase Order without prejudice to any of the rights or remedies the Owner/Consultant may be entitled to as per terms and conditions of Purchase Order/Contract.

ARTICLE-7: DRAWING AND DESIGNS

- a. The drawings and detailed technical specification shall be supplied in stages, after the award of work, keeping in view the site requirements.
- b. All drawings, designs, specifications and other documents furnished by the Owner/ Consultant to the contractor, including all features whether patented or patentable or not, or whether separately or collectively shown, are the exclusive property of the Owner and shall be confidential and shall not be lent or reproduced in whole or in part nor used for any purposes other than in execution of the Contract without the previous written consent of the Owner/Consultant. Such drawings, designs and other documents are loaned by the Owner/Consultant to the Contractor and subject to return on demand.
- c. Where with the written permission of the Owner/Consultant the Contractor reproduces any drawing or design in whole or part, the contractor shall stamp it as follows:
 - This drawing/design, including all patented and patentable features separately or collectively shown is reproduced from a drawing/design which has been furnished by the (Owner/Consultant) and is not to be reproduced or used for any purpose other than those specifically permitted in writing by the (Owner/Consultant).
- d. Any reproduction of any such drawings, designs, specification or any other document shall be equally subject to return on demand or on completion of work as the clause (b) above, whichever is earlier.

ARTICLE-8: PATENT AND OTHER RIGHTS

- a. The contractor shall fully indemnify the Owner against any action, claim or demand, costs or expenses, arising from or incurred by reason or any infringement or alleged infringement of any letters, patent, registered design, trade mark of name copy right or other protected right in respect of the work or method of using, fixing, or working the Equipment's authorized or recommended by the Contractor.
- b. The Owner warrant on their part that any design or instructions furnished or given by him for performance of work hereunder to the contractor shall not be such as will cause the contractor to infringe any letters patent, registered design, trademarks or copy right in the performance of the contract.

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In the event of any action being brought or any claim or demand being made against owner on account of any such matter as aforesaid, the Contractor shall immediately be notified and he shall at his own expenses fully cooperate with Owner and shall do all that the Owner may reasonably require in defence in such action or to resist such claim or demand.

ARTICLE-9: ROYALTIES

All payments and royalties payable in respect of any letters, patent and other rights whether payable in one lump-sum or by installments or otherwise are included in the Contract Price. Owner/consultant shall not be liable to pay such dues or sums.

ARTICLE-10: ASSIGNMENT AND SUBLETTING

- a. The Contractor shall not without the consent in writing of the Owner/Consultant assign or transfer the contract or benefits or obligations or any part thereof to or enter into any subcontract with any other person. Any such consent shall not relieve the Contractor from his obligations under the Contract.
- b. If any sub-contractor engaged upon the work with due permission from Owner/Consultant at the site executes any work which in the opinion of the Owner/Consultant is not of the requisite standard (the opinion of the Owner/ Consultant being final in this regard), the Owner/Consultant may by written notice to the Contractor require the Contractor to terminate such sub-contract, and contractor shall upon the receipt of such instructions terminate such sub-contract at the risks and cost of the Contractor, and shall keep Owner/Consultant indemnified against all the consequences.

ARTICLE-11: GUARANTEE

- a. All Equipment supplied and work done by the Contractor pursuant to the Contract shall be guaranteed by the Contractor to be in accordance with the specifications contained in the contract, new and of the best quality and workmanship and to be of expert design conforming to generally accepted Indian/International standard to be of sufficient size and capacity and of proper materials so as to fulfill in all respects requirements specified in regard thereto.
- b. If at any time during the execution of the work or during the maintenance period specified in Article-31 hereof, the Owner/Consultant shall decide that any equipment supplied or work done by the contractor fails in any respect to conform to the guarantees given by the contractor in paragraph (a) hereof, the Owner/Consultant may as soon as reasonably practicable, give the contractor a notice in writing of the respects in which the equipment supplied or the work fails to conform to the such guarantee and the contractor shall thereupon, at his own expense, replace any equipment and carry out any further work that may be necessary to ensure that the equipment supplied and the work done conforms to such guarantee.



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- c. If the contractor fails within a reasonable time not exceeding 15 days from the date of notice in this behalf from the Owner/Consultant to take such steps as may be necessary to fulfill his obligations under paragraph (b) hereof then the Owner/Consultant may, at the expense of the contractor shall conform to such guarantee.
- d. If any replacement of equipment or the work done by the contractor pursuant to this article shall be of such a nature as to effect the efficiency or performance of the whole or any portion thereof, Owner/Consultant may give notice to the contractor in writing requiring that a test or tests shall be carried out at the expense of the contractor and in accordance with the technical standards prescribed by Bureau of Indian Standards.

ARTICLE-12: VARIATIONS AND OMISSIONS

- a. The contractor shall not; alter any of the work except as directed in writing by the Owner/Consultant but the Owner/Consultant shall have the full power from time to time during the execution of the contract by notice in writing to direct the contractor to alter, amend, omit, add to, or otherwise carry out any of the work, and the contractor shall carry out such variations, and be bound by the contract so far as applicable as though the said variations were stated in the contract. In any case, in which, the contractor has received any such direction from the Owner/Consultant which either then, or in the opinion of the contractor, will later involve an increase or decrease in the contract price, the contractor shall within seven (7) days of such direction, advise the Owner/Consultant in writing to that effect. The Owner/ Consultant shall thereupon approve in writing such variations which are to be given effect together with the amount of increase or decrease in the contract price on that account. The contractor shall then give effect to such variations. The difference in cost, if any, occasioned by any such variations, shall be added to or deducted from the contract price and paid in the same way as the contract price.
- b. If in the opinion of the contractor any such variation is likely to prevent or prejudice him from fulfilling any of obligations under the contract, he shall notify the Owner/ Consultant thereof, in writing and the Owner in consultation with consultant shall decide forth with whether or not such variations; shall be carried out. If the Owner/ Consultant amends his instructions in writing, the said obligations shall be modified to such an extent as may be agreed in writing between the owner and the contractor, provided however, that the contractor may not call upon the owner to agree to any such variations as would in any way, have the effect of modifying the obligations of the contractor under the provisions of Article-8 and 11 hereof.

If any variation in the scope of work necessitates any extension in the time for completion, the provisions of Article-25 here of shall apply.

ARTICLE-13: EXECUTION OF WORK IN INCLEMENT WEATHER



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The contractor shall, during inclement, weather, carryout the work in accordance with the contract and the contractor shall not be entitled to any additional payment over and above the contract price by reason of his being unable to carry out the work owning to inclement weather.

It is presumed that the Contractor has familiarized himself with the weather conditions preailing in the area therefore in such weather parameters if it appears to the Engineer -in -charge (EIC) that certain weather condition may damage the work or specified quality of the work can be achieved without stoppage of the work, the EIC in such conditions may require the Contractor to stop the work till such time as he thinks fit and appropriate. It is understood by the contractor that no compensation will be admissible on this count. in exceptional circumstances at the recommendation of the Consultant/owner may grant reasonable extension of Time.

ARTICLE-14: CONTRACTOR'S DEFAULT

If the contractor shall fail or neglect to execute the work with all diligence and expedition, or shall refuse or neglect to comply with any reasonable orders given to him in writing by the Owner /Consultant in connection with the work, or shall contravene the provisions of the contract, the Owner/Consultant may give notice in writing to the contractor specifying the time within which to make good such failures, neglect or contravention. Should the Contractor fail to comply with the notice within the time specified in the notice, then the Owner either on its own or in consultation with the consultant shall be at liberty forthwith to make good such failure, neglect or contravention and to execute such part of the work as the contractor may have failed or neglected to do, all without prejudice to other rights the owner may have under contract, to take the work wholly or in part out to the contractor's hands and enter into contract with any other person, firm or company to complete the work or any part thereof, and in such events the owner shall have free use of all contractor's hands and enter into contract with any other person, firm or company to complete the work or any part thereof, and in such events the owner shall have free use of all contractor's equipment and other things that may be at any time on the site in connection with the work, without being responsible to the contractor, for fair wear and tear thereof, and to the exclusion of any right of the contractor over the same, and the owner shall be entitled to retain any balance amount which may be otherwise due under the contract to the contractor or such part thereof as may be necessary to the payment of the cost of executing the said part of the work or of completing the work as the case may be and of meeting claims of third parties against the owner and arising from or in consequence of the contractor's failure, neglect, refusal or contravention as aforesaid, if the cost of completing the work or executing a part thereof or of meeting claims of third parties as aforesaid shall exceed the balance due to the contractor under this contract the owner shall have right to recover the balance from amounts payable to the contractor under any other contract or from his performance guarantee. The contractor shall not resort to unilateral stoppage of work due to any reason whatsoever. If he does so, it shall be treated as default and breach of contract.

ARTICLE-15: BANKRUPTCY AND WINDING UP

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If the contractor shall become bankrupt or insolvent or have a liquidator/receiver appointed over his company, or 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 reconstruction, or carry on its business under a receiver for the benefit of its creditors or any of them, the owner shall be at liberty -

- a. to terminate the contract forthwith by notice in writing to the contractor or to The Receiver or Liquidator or any person in whom the contract may become vested, and to act in the manner provided in Article-14 hereof as referred to in such Article and the work had been wholly taken out of contractor's hands or
- b. to give such receiver, liquidator, or other person the option of carrying out the contract subject to his providing guarantee for the due and faithful performance of the contract to the extent of work desired by the owner and upto the amount to be agreed within; the over all contract value.

ARTICLE-16: INSPECTION AND TESTING

- a. The representatives of the Owner and the consultant shall be entitled at all reasonable time to inspect the work or any part thereof. The contractor shall provide all necessary assistance to the Owner/Consultant and shall make available all such tools to enable the owner/consultant may require carrying out such tests/inspection. The contractor shall uncover any part of the work or make openings for inspection as the Owner/Consultant direct and shall reinstate and make good such part to the reasonable satisfaction of the Owner/Consultant. The contractor shall ensure that his sub-contractors and vendors also provide such facilities for inspection and tests by the Owner/Consultants that have been mentioned in this clause.
- b. On receiving notice from the contractor that the work is ready for inspection, the Owner/Consultant shall without unreasonable delay, attend for the; purpose of inspecting the said work. The Owner/Consultant reserves the right to waive participation in any test requirements, which however shall not absolve the contractor of his liabilities herein. When the tests have been completed satisfactorily, the contractor shall furnish the test certificates for owner/consultant's signatures within two days of completion of such tests.
- c. The owner/consultant shall have the right, according to his judgment and specifications to for-bid the use and the dispatch of all such materials which, during tests and inspections, fail to comply with requirements.
- d. The contractor shall not dispatch any equipment without the completion of final inspection by the owner/consultant. The waiver from participation in the final inspection shall be made by the owner only.
- e. Whenever it is necessary to cover up any work in respect of which previous inspection is desired and the contractor has been notified accordingly by the owner/consultant in writing, the contractor shall give notice in writing to the owner/consultant before the work is covered



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up. No such work shall be covered up or built upon unless it has been inspected and approved by the owner/Consultant or unless the owner's consent in writing to this was being done without his previous inspection and approval has been obtained in advance.

f. Inspection/waiver by Owner/Consultant shall not, however, relieve the contractor of its obligations including guarantees and warranty obligations hereunder.

ARTICLE-17: ORIGIN OF MATERIALS

- a. The Owner shall have the right, at any time, to call upon the contractor for evidence of origin of raw materials and parts of equipment.
- b. All equipment supplied or used shall be new and of first class and quality of the grade specified.

ARTICLE-18: MILL CERTIFICATES

All mill certificates covering physical and analytical tests are to be produced as called for by the owner/consultant at no extra cost.

ARTICLE-19: FLAME PROOF ELECTRICAL EQUIPMENT

Where the equipment include flame-proof electrical equipment to a recognized Indian Standard or code of practice, then the contractor shall forward copies of the relevant certificates to the owner at no extra cost.

ARTICLE-20: TEST CERTIFICATES

The contractor will, if so required by the owner/consultant supply specified numbers of test certificates and/or materials analysis certificates. Reports from recognized agencies of repute (The agencies shall be approved by consultant/owner). In case of any doubt the contractor shall repeat the test at his own cost.

ARTICLE-21: ACCESS TO AND POSSESSION OF THE SITE

a. Subject to paragraph (c) hereof, access to and possession of the site shall be afforded to contractor by the owner/consultant in reasonable time.



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- b. In the execution of the work, no persons other than contractor's employees or labours shall be allowed on the site, except by the written permission of the owner, but facilities to inspect the work at all times shall be afforded to the owner/consultant and his representatives and other authorized officials or representatives of the owner/consultant.
- c. The access to and possession of the site referred to in paragraph (a) hereof shall not be exclusive to the contractor but only such as shall to enable him to execute the work. The contractor shall afford to the owner/consultant, and to other contractors authorized by owner/consultant every reasonable facility for the execution of work concurrently with his own.
- d. Unless otherwise provided in the contract, the owner shall give contractor facilities as far as possible for carrying out the work on the site continuously during the normal working hours as fixed by the owner, the owner may, after consulting with the consultant direct that the work shall be done at other times if it shall be practicable in the circumstances for the work to be so done.
- e. Construction Water and Power shall be arranged by Contractor at their own cost.

ARTICLE-22: CONTRACTOR'S EQUIPMENT

- a. The contractor shall, at his own risk and expenses, provide all equipment necessary to execute and complete the work, If any equipment is available with owner at the site, the contractor may, with the written consent of the owner, use the same on payment of necessary charges as fixed by the owner.
- b. All contractors' equipment shall be used solely for the purpose of the work at site and shall not be removed from site by the contractor, without the permission in writing of the Owner, and the contractor shall be liable for the loss or destruction thereof or damage thereto. If there shall be any due owing or accruing to owner, from the contractor any money in respect of this contract, the owner shall be at liberty, at the cost of the contractors, to sell and dispose of any such (Contractors) equipment, as the owner shall think fit, and to apply the proceeds in or towards the satisfaction of such money as aforesaid.

ARTICLE-23: CONTRACTOR'S REPRESENTATIVES AND WORKMEN AT SITE

- a. The contractor shall employ one or more competent and authorized representative whose name or names with specimen signature shall have previously been communicated in writing to the owner/consultant by the contractor, to superintend and carrying out the work. The said representative shall be present at site during working hours and any orders or instructions which the owner/consultant may give to the said representative shall be deemed to have been received by the contractor.
- b. The consultant and/or owner shall be at liberty to serve by notice in writing to the contractor to object to any representative or person employed for execution or otherwise for the work, who, in the opinion of the owner/consultant, misconduct himself or is incompetent or

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negligent. On receipt of such notice, the contractor shall remove such person from the site forthwith.

- c. The consultant and owner shall be given the opportunity to approve the employment of casual labour hired for the work.
- d. The contractor and his employees shall abide by the site working rules.
- e. The contractor shall immediately notify the owner/consultant in writing of any labour dispute affecting the work. Such notice shall describe the nature of labour dispute and the actions being taken by the contractor to settle the disputes.
- f. The contractor shall keep the owner/Consultant indemnified from and against all personal and third party claims whatsoever (inclusive of all costs incurred between attorney and client) arising out of any act, omission or intermission on part of contractor, any sub-contractor or agent, sub-agent, consultant or employee of the contractor or any sub-contractor whether committed, omitted or arising within or without the scope of the contract, sub-contract agency or employment, as the case may be.

ARTICLE-24: LIABILITY FOR ACCIDENTS, DAMAGE AND INSURANCE

- a. The contractor shall, during the execution of the work, properly cover up and protect any part of the work liable to injury by exposure to the weather and; shall take every reasonable precaution against accident or injury to the work from any cause.
- b. All contractors' equipment shall be at the sole risk of the contractor.
- c. The contractor will insure all his personnel employed for the execution of the work against any personal injury that may be sustained by them as a result of the execution of the work and present satisfactory evidence to the owner/consultant that such insurance is in force.
- d. The contractor shall be responsible for workman's compensation insurance and all other statutory requirements in regard to the personnel in the contractor's employment.
- e. HURL will be taking storage / erection policy. The contractor at his own cost shall arrange, secure and maintain all insurance that may be pertinent to the works and obligatory in terms of law to protect his interest and interest of the owner against all points including accident insurance in the joint names of contractor and the owner. Contractors All Risk Insurance Policy covering a) fire & lightening / lighting, b) accident damage during construction for example due to dropping or falling or defective workmanship and materials, lack of skill, negligence, malicious act or human error, c) water damage, flood, storm, tempest inundation, earthquake, d) Collapse, collisions, impact e) theft and burglary, malicious damage f) subsidence, land slide, rock slide. The period of insurance cover shall be from commencement of work upto completion and handing over of the work to the owners. The sum insured should represent the completed value of work done including cost of all materials etc.

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ARTICLE-25: TIME FOR COMPLETION

- a. The terms and conditions agreed upon with respect to this agreement shall be subject to 'Force Majeure'. 'Force Majeure' shall be deemed to be only cause beyond the reasonable control of the contractor or the owner, as the case may be, which prevents or impedes the due performance of the agreement and which by the due diligence the affected party is unable to avoid or overcome through its individual concerted effort. For the purpose of this Article, Force Majeure shall mean and be limited to the following:
 - i) Any war or hostilities;
 - ii) Any riots or civil commotion;
 - iii) Any earthquake, flood, tempest, lightening or other natural physical disaster;
 - iv) Any accident fire or explosion not caused by the negligence of the contractor;
 - v) Any legal strike / lock-out or other industrial disturbance (only those exceeding 10 continuous days in duration) affecting the performance of the contractual obligation.
 - vi) Any law or order of any Government Department or other authority which delays or impedes the contractor in the execution of the work.
- b. If either party is prevented or inordinately delayed in the performance of any of its obligations under the agreement by Force Majeure and if affected party gives written notice to the other party specifying the matter constituting Force Majeure with necessary evidence that a contractual obligation is thereby prevented or delayed, and the further period which it is estimated that such prevention or delay will continue, then the effected party shall be excused the performance or delayed performance as the case may be of such obligations as from the date of such notice for so long as may be justified.
- c. Any occurrences of Force Majeure shall be informed in writing within seven days of occurrence otherwise it shall not be deemed as force majeure. Such Force Majeure shall be effective from the date of receipt of such notice from either party. Continuance of Force Majeure shall be informed every week.
- d. If by virtue of the proceeding paragraphs either party shall be excused the performance or punctual performance of any obligation for a continuous period of six months the parties shall consult together with a view to agreeing what action should in the circumstances be taken and what amendments to the terms of the contract ought to be made.
- e. For variation in the scope of work resulting into additional 20% in estimated contract value, no extension in completion time shall be admissible. Notwithstanding any other provision in the contract, the Owner/Consultant may at any time of its own initiative or at the request of the contractor, if satisfied of the existence of any ground (s) may extend the completion period by duration as deemed reasonable. The decision of the Owner/Consultant in this regard shall be final and binding upon the contractor.



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f. Within (7) seven days from the date of receipt of work Order the contractor shall submit to the owner/consultant for approval in respect of each job site or groups of work or a detailed Progress schedule in graphical or other suitable form giving dates of starting and finishing of various operations and works related to the work providing sufficient margin to cover for contingencies and for final testing and consequential repair etc., if any required. The owner/consultant and contractor shall thereafter within seven days settle the progress schedule and the progress schedule so settled shall be the approved progress schedule and shall form part of the contract with attendant obligations upon contractor to commence the various works/operations involved on or before the date(s) mentioned in; the progress schedule and to conclude the said work(s)/ operation(s) on or before date mentioned in this behalf in the approved progress schedule, and default by contractor to commence or complete within prescribed date(s) any work or operation shall be deemed to be a breach of contract by the contractor to which the provisions of clause 30 relating to termination of contract shall be applicable, but without prejudice to any other rights or remedies that owner may have in this behalf.

g. PREDETERMINED AGREED DAMAGES FOR DELAY

If for reasons not attributable to the owner or due to conditions not constituting force majeure as defined in this contract the work is not completed in accordance with the provisions hereof within and in accordance with the Time Schedule hereto/the TIME FOR COMPLETION, it is clearly understood and agreed that the Owner shall be entitled to and the contractor shall pay to the Owner the following as mutually agreed damages for delay (which are a genuine pre-estimate made by the parties of the loss which the Owner would have suffered on account of such delay in completion of the work) after taking into consideration all circumstances and not as penalty and without the owner being required to establish and prove the actual loss/damage suffered by the owner on account of such delay:

- i. The pre estimated mutually agreed damages for delay pursuant hereto shall be payable at the rate of 1/2% (half percent) of total contract value per week or part thereof's delay in completion of the work subject to a maximum of 5% of final value of work. It is expressly agreed by and between the owner and the contractor that no prior notice will be required to be given by the owner to the contractor, before effecting recovery of compensation amount from their bills/other due if any.
- ii. Notwithstanding anything to the contrary contained in this Contract and without prejudice to the rights of the Owner under this CONTRACT and the entitlement to the said pre-estimated mutually agreed compensation for delay and in addition and not in derogation or substitution thereof the owner shall be entitled to terminate this contract in whole or in part without being liable to the contractor in any manner whatsoever or to have the uncompleted portion of the work to be executed/performed pursuant hereto by the contractor completed/ executed/performed at the risk and cost of the contractor in the event of, and despite 30 days notice in writing the contractor failing to complete/execute/perform all or any part of the work to be completed / executed / performed pursuant hereto by the contractor within and in accordance with



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the Time Schedule hereto/the TIME FOR COMPLETION as extended in accordance with the provisions hereof or by the owner.

ARTICLE-26: COMPLETION TEST

Completion test if applicable shall be carried out as per technical specification in Contract / BIS.

ARTICLE-27: TAKING OVER

- a. taking over shall be done at one stage after completion of the entire job except where desired by owner otherwise. Only one completion certificate shall be issued after completion of all jobs.
- b. Within 15 days of carrying out final inspection of the works at any job site covered by the contract, the contractor shall clear the job site covered by the contract, the contractor shall clear the job site of all scaffolding, wiring, pipes, surplus materials, contractor's labour's equipment and machinery and shall, demolish, dismantle and remove all contractor's site offices and quarters and other temporary works, structures and constructions and other items and things whatsoever brought upon or erected at the job site or any land allotted to the contractor by the owner and not incorporated in the permanent works and shall remove all rubbish from the job site and the land allotted to contractor and shall clear level and dress the job site and said land to the satisfaction of the owner/consultant and shall put the owner in undisputed custody and possession of the job site and all land allotted by the owner to the contractor, and unless the contractor shall have fulfilled the provisions of this clause the works shall not be deemed to have been completed.
- c. The contractor shall submit following documents as desired by owner before completion certificate is issued:
 - i) The Technical Documents according to which the work was carried out;
 - ii) Complete set of working drawings showing therein corrections and modifications (if any) made during the course of execution of the works, signed by the owner;
 - iii) Certificates of final levels as set for various works, signed by the owner;
 - iv) Final Test Certificate;
 - v) Certificates of owner; of satisfactory fulfillment of the provisions as above hereof;
 - vi) List of owner supplied surplus materials returned to owner's stores, signed by the owner:
 - vii) Materials-at-site accounting for owner supplied materials, signed by the owner;
 - viii) List of the scrap materials returned to store, signed by the owner.
 - ix) Discharge certificate in respect of owner supplied equipment and machinery signed by the owner.
 - x) Any other certificate/document which owner/consultant may find necessary.
- d. The issue of completion certificate shall be without prejudice to the owner's rights and contractor's liabilities under the contract, including the contractors liability for the defect



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liability period nor shall the issue of a completion certificate in respect of the works or work at the job site be construed as a waiver of any right or claim of the owner against the contractor in respect of work or the works at the job site in respect of which the completion certificate has been issued.

e. Upto and until issue of the completion certificate as provided for herein above in respect of the works or the works at job site the relative work(s) shall be and remain at the risks of the contractor in all respects, including (but not limited to) accident, fire, lightning, earthquake, flood, store, tempest, riot, civil commotion and /or war.

ARTICLE-28: SUSPENSION OF WORK ON INSTRUCTION OF OWNER/ CONSULTANTS

- a. The Contractor shall on the written order of the owner/consultant, delay or suspend the progress of the work for such time or times and to such extent and in such manner as owner/consultant may specify.
- b. All reasonable expenses incurred by the contractor by reason of such delay or suspension by the owner/consultant otherwise than in consequence of some default on the part of the contractor shall be added to the contract price, provided that no claim shall be made under this article unless the contractor has within 7 days, after the event giving rise to the claim, give notice in writing to the owner/consultant of his intention to make such claim. However, no compensation for suspension of work by the consultant or the owner shall be payable to the contractor if the period of suspension is 30 days or less.
- c. If in the opinion of the contractor the suspension shall necessitate any extension in the time of completion, the provision of article no. 25 hereof and related article in respect of extension of time shall apply.

ARTICLE-29: CANCELLATION OF CONTRACT

- a. The owner shall be entitled at any time at its discretion to cancel the contract if, in the opinion of the owner, the cessation of the work becomes necessary owing to any cause whatsoever, and a notice in writing from the owner to the contractor of such cancellation and the reason(s) therefore shall be conclusive proof of such cancellation and the reasons thereof.
- b. Upon cancellation of the contract, the owner shall take over from the contractor the approved materials lying at job site on the date of the cancellation at the rate(s) for such material(s) as specified in relative item(s) of the schedule of rates, and if the rate(s) for any material(s) be not (in the opinion of the owner which shall be final) specified in the schedule of rates at market rate(s) for such material(s) current on the date of the cancellation. The decision of the owner/consultant as to the approved materials lying at site on the date of cancellation and the quantities and market rate(s) thereof shall be final and binding upon the contractor.

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c. The contractor shall not be entitled to any compensation in addition to the payment for the work actually performed by rates as a result of such cancellation notwithstanding that such cancellation may have resulted in the performance of quantities of work below the quantities indicated in the form of schedule of rates and/or of a value below the total contract value indicated in the work order.

ARTICLE-30: TERMINATION

- 1 (a) The Owner may, for breach of any provision of the contract by the contractor at any time by notice in writing to the contractor, terminate the contract.
 - (b) In the event of termination pursuant to paragraph(s) of this Article
 - i) The contractor shall carry out instructions of the owner in connection with such termination including the cancellation of orders and the termination of contracts which the contractor may have placed with others.
 - ii) The owner shall pay the contractor for all materials used and work executed pursuant to the contract, but unpaid at the date of such termination together with any costs necessarily incurred by the contractor in connection with the work as a result of such termination provided that owner shall not be liable for any indirect loss, any business loss or damage or loss of profit suffered by the contractor as a result of such termination.
 - iii) For the purpose of determining the amount due to the contractor joint measurements shall be taken for the work completed and material supplied as on the date of termination. Bill prepared by the contractor on the basis thereof shall be deemed to be the final bill.
 - (c) The contractor shall upon receiving notice from the owner in accordance with paragraph (a) of this Article, notify the owner within a reasonable time of the sums for materials used and work executed as mentioned in paragraph (b) (ii) of this Article. These sums and all terms and conditions of termination pursuant to this Article may be agreed in writing between the owner and the contractor.
- 2. In the event of any breach of the provisions of the agreement or default in the performance of the obligations by the contractor not being remedied by him within 30 days of receipt of notice in that behalf from the owner, the owner shall be entitled to terminate the contract forthwith without prejudice to its other rights and remedies hereunder, by a communication in writing to the contractor and as such on termination the contractor shall be liable to pay to the owner for all loss and damages and sums that may be suffered and incurred by the owner including the additional costs incurred in rectifying default and/or completing unfinished work notwithstanding anything contrary contained in this contract.



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- 3. Upon termination of the contract pursuant to this Article, obligations of the parties hereto shall cease except as to the liabilities of either party to the other for obligations accrued prior to the date of such termination.
- 4. Within 15 days of completion of measurements, the contractor shall clear the job site of all scaffolding, wiring surplus materials, labours, construction tools, equipment & machinery and shall dismantle, demolish and remove site office, labours quarters etc. or any other thing instructed by owner. Should the contractor fail to comply with the instructions of owner in this regard, owner shall be entitled to take undisputed possession of site and take action for site clearance at the risk and cost of contractor.

ARTICLE-31: MAINTENANCE PERIOD

FOR ALL WORKS

- i) The contractor guarantees that the work shall perform in accordance with the contract. He shall protect the work until the completion of same as certified in writing by the owner/consultant.
- ii) He shall also maintain in good and substantial repair, fair wear and tear expected, the whole of the works until the expiration of the maintenance period of 12 months after the certified completion of the works as whole and he shall also be liable for the soundness and stability thereof, and be responsible for injury to any person or property owing to any settlement, failure, defect, damage or fault due to any cause whatsoever other than earthquake or fire during this period. This liability and responsibility shall not be affected or removed by any certificate of satisfaction or for payment of money which the owner/consultant may at any time give or have given. Moreover, the contractor shall at his own cost, restore such settlement, failure, defect, damage or fault without charge to the owner or the owner may restore such settlement; failure, defect or damage at the contractor's risk and cost. In any case, the contractor shall be liable for and shall pay and make good to the owner or other person or parties being entitled thereto, all losses, costs and expenses they or any of them may put to or be liable to be by reason or in consequence of the settlement, failure, damage or defect and the owner may deduct the amount of losses, cost or expenses from any sum due or to become due to the contractor, or may recover the same from his performance guarantee.
- iii) The defects or other faults which may appear within the said maintenance period and which in the opinion of the owner/consultant who shall be the sole deciding authority in this respect have arisen from material or workmanship not in accordance with the contract, shall be rectified by the contractor at his own cost to the satisfaction of the owner/consultant within the period mentioned in the notice to be issued by the owner/consultant specifying the defects and directing the rectification thereof. Failing this rectification the owner will be at liberty to rectify the said defects by and through any other agency at their sole discretion entirely at the risk and cost of the contractor. In the event of such rectification being carried out by the owner on default of the contractor Owner shall deduct from the contractor's dues such sum of money as may be certified by the



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owner/consultant for the rectification for the said defects. The certificate of the owner/consultant in this respect as aforesaid shall be final, binding and conclusive to the contractors, Provided always that the liability of the contractor under this condition shall not extend beyond the maintenance period as aforesaid except as regards the defects and faults which the owner/consultant may have previously given notice to the contractor to rectify.

ARTICLE-32: PAYMENT DUE FROM THE CONTRACTOR

All costs, damages or expenses for which the contractor is liable under the contract may be deducted from any money due or becoming due to the contractor on any account whatsoever or may be recovered by action at law or arbitration.

ARTICLE-33: PAYMENTS

Payment Terms shall be applicable as per Annexure-1.10 of Section-A, Commercial Part.

ARTICLE-34: OBSERVANCE AND COMPLIANCE OF STATUTORY RULES/ LAWS

- a. The rights and obligations of owner and contractor and provisions of the agreement shall be governed by the Indian Laws.
- b. The contractor will be fully responsible for all matters arising out of the performance of the contract and shall comply at his own expenses with all the laws/ enactment's/ orders/ regulations/ statutory obligations, whatsoever, of the Government of India/State Govt./any Statutory or non-statutory authority. The contractor hereby agrees to indemnify and keep harmless the owner/consultant against all liabilities in this respect. The contractor shall be fully and exclusively responsible for the work, conduct, supervision and control of all their own personnel and personnel employed by the sub-contractor engaged by them and owner/consultant shall in no way be responsible for supervision, control etc. of these personnel. Since the contractor shall have full and exclusive supervision and control over the contract awarded to him, and the people engaged for this purpose, the contractor or his sub-contractor, as the case may be, shall be the principal employer under the contract labour (Regulation & Abolition) Act. 1970 and the contractor shall register himself as such; and the owner/consultant shall have no responsibility and liability on this account.
- c. The contractor shall observe all safety rules so that no harm or damage is done to the owner's employees or property. The owner/consultant shall have their right to object to any unsafe practices followed by the contractor or their subcontractors. If on account of the contractor or sub-contractor, owner's property or personnel are likely to suffer any damage in such cases any directions, issued by owner/consultant shall be complied with by the contractor and their sub contractors.



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- d. The contractor shall at all times be responsible for work under the supervision and control of all its personnel in connection with the work awarded to him under this contract, whether the personnel are employed by the contractor or by any sub-contractor engaged by him.
- e. If, in the opinion of owner, any employee or employees of the contractor or his sub-contractor is found to be suffering from any disease, infections or otherwise or if any employee of the contractor or his sub-contractor is found to commit any misconduct including use of intoxicants or on account of any other reasonable cause, owner/consultant at its sole discretion may if require, the contractor to remove such employee(s) without questioning the decision of the owner/consultant in this respect and owner will be entitled to restrain such employee(s) from entering the premises.
- f. The contractor shall engage sufficient number of personnel with suitable qualification and experience so that the work and job assigned to the contractor are completed as per the specifications and within the time schedule.
- g. Contractor shall be responsible to keep himself informed of all the statutory laws, rules and Regulations of Central Government, Municipality etc. Contractor shall be responsible to secure compliance with all central and state laws as well as the rules, regulations, bye-laws and orders of the local authorities and statutory bodies as may be in force from time to time.
- h. Contractor shall be responsible to ensure that no loss or damage is caused to the adjoining property around the battery limits of the project. In case of any damage or loss to adjoining property which is attributable to them, the contractor shall make good the loss or damage at his own cost.

i. PAYMENT OF WAGES BY THE CONTRACTOR

The wages of every labourer employed by the contractor under this contract shall be paid by him before the expiry of 7 days after the last day of the month in respect of which the wages are payable (i.e. wages of the previous month). The minimum wages rates. As notified from time to time by the Government as per the minimum wages act. 1948 and/or such other authority will have to be paid by the contractor to all his workers. The payments shall be disbursed against muster roll in the presence of the owner's representative and the same shall be affected during working hours in the factory premises. In case of any default/delay, the company will have the right to disburse the due payments to the contractor's workmen and the amount so disbursed together with any other expense incurred by the company to meet the contractor's pending bills/security deposit, if any besides, the owner shall also have the right to cancel the contract forthwith.

j. PROVIDENT FUND:

The contractor will also strictly observe the provisions of employees provident fund act. The contractor shall have their own P.F. code. The contractor shall have to submit documentary

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evidence of his P.F. code otherwise bid not be considered. The contractor shall be required to submit documentary proof requiring remittance of P.F. of their workers during execution of work otherwise their bills not be cleared.

k. The contractor will provide access to their records so that HURL/Consultant can check regular and just payment of the minimum wages and remittances of PF of the workmen to their account.

ARTICLE-35: RESOLUTION OF DISPUTES/ARBITRATION

- 35.1 The Owner/Consultant and the Supplier shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the Purchase Order.
- 35.2 If, after thirty (30) days from the commencement of such informal negotiations, the Owner/Consultant and the Supplier have been unable to resolve amicably a Purchase Order dispute, either party may require that the dispute, be referred for resolution to the formal mechanisms as specified hereunder.

35.3 LEGAL CONSTRUCTION

Subject to provision of Article 35.4, the Work Order shall be, in all respects, construed and operated as an Indian contract and in accordance with Indian laws as in force for the time being and is subject to the exclusive jurisdiction of the court at Delhi only.

35.4 ARBITRATION

- a. Any dispute or difference whatsoever arising between the parties out of relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by arbitration in accordance with the provisions of the Arbitration & Conciliation Act, 1996 and any amendments thereafter, and the award made in pursuance thereof shall be binding on the parties.
- b. The performance under this contract shall not stop for any reason whatsoever during the said dispute/proceedings, unless the contractor/supplier is specifically directed by Owner/Buyer to desist from working in this behalf.
- c. The Jurisdiction Venue of all arbitration shall be at Delhi only.
- d. The language of proceedings shall be English.
- e. The Law governing the substantive issues between the parties shall be the Laws of India.

ARTICLE- 36: RECOURSE



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The Owner shall have recourse to the contractor for any costs, claims, demands, proceedings, damages and expenses whatsoever arising out of or in connection with any failure of the contractor to perform any of his obligations under the terms of contract.

ARTICLE-37: ADVERTISEMENT

No advertisement, publicity matter or other literature in relation to the contract or the work is to be published or utilized by the contractor except with prior written permission of the owner.

ARTICLE-38: CONSTRUCTION OF CONTRACT

The contract to the exclusion of all other agreement, statements or representation whether oral or written constitutes the full agreement between the parties hereto for the work to be performed hereunder.

ARTICLE-39: INTERPRETATION OF CONTRACT

- a. The several contract documents forming the contracts are to be read together as a whole and are to be taken as mutually explanatory.
- b. Should there be any doubt or ambiguity in the interpretation of the contract documents or error, omission or contradiction therein or in any of them, the contractor shall prior to commencing the relative work, apply in writing to the owner for his decision in resolution of the doubt, ambiguity or contradiction or correction of the error or omission, as the case may be. Should the contractor fail to apply to the owner for his decision, as aforesaid prior to commencing the relative work, the contractor shall perform said work as per interpretation of owner whose decision shall be final and binding on contractor.

ARTICLE-40: SECRECY CLAUSE

The technical information, drawings, specifications & other related documents forming part of the WORK ORDER are the property of OWNER and shall not be used by CONTRACTOR for any other purposes, except for the execution of the WORK ORDER. All rights including rights in the event of grant of a patent and registration of design are reserved. The technical information, drawings, specification records and other documents shall not be copied, transcribed, traced or reproduced in any other form or otherwise in whole or in part and/or duplicated, modified, divulged and/or disclosed to a third party nor misused in any other form whatsoever without OWNER's prior written consent except to the extent required for the execution of WORK ORDER. CONTRACTOR confirms that he/it has read and understood the secrecy and confidentiality obligations of the OWNER as provided in this W.O. and agrees to abide by the obligations (including indemnity obligation) cast upon the OWNER. Successful bidder will have to execute secrecy agreement with owner, format of which shall be mutually agreed.



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ARTICLE -41: INDEMNIFICATION

Supplier does hereby agree to indemnify and hold harmless the Owner/Consultant from all claims, losses demand clauses of action or suit arising out of the services, labour, equipment and materials furnished by supplier.

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SECTION-A: COMMERCIAL

ATTACHMENT - 3.0

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0	11.07.2017	FOR TENDER	SK	KJ	RRK
REV.	DATE	PURPOSE	PREPARED	REVIEWED	APPROVED



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1.0 RATES

- 1.1 The rates shall be deemed to allow for all minor extras and constructional details which are not specifically shown on drawings or given in the specifications but are essential in the opinion of the Owner/Consultant to the execution of work to conform to good workmanship and sound engineering practice. The Owner / Consultant reserve the right to make any minor changes during the execution without any extra payment.
- 1.2 The Owner / Consultant decision to classify any item 'minor changes', 'minor extras' and 'constructional details' shall be final conclusive and binding on the Contractor.
- 1.3 The Percentage Rates quoted shall include for payment of royalties for obtaining earth, morrum, sand, aggregates, stones, etc. Nothing extra shall be paid to the Contractor on this account.
- 1.4 Contractor shall be responsible for making all necessary approach roads to the sites of execution for taking his rigs, cranes & equipments. No extra claim in this regard shall be entertained.
- 1.5 Schedule of rates submitted by the Tenderer shall be the true copy of the schedule of rates enclosed with the tender documents
- 1.6 Without prejudice to stipulation in General Conditions of Contract, the Bidder should quote firm prices inclusive of all taxes & duties (except GST) and other levies on which no variation will be allowed. Further any statutory variations in respect of taxes & duties, if any, shall be governed by Clause 39.0 of the SCC.

2.0 SPECIFICATIONS

- 2.1 If specification for an item of work is not covered by CPWD/BIS specifications or Technical Specifications, the same shall be decided by the Owner/Consultant and shall be binding on the Contractor.
- 2.2 The Owner/Consultant shall have the right to cause the Contractor to purchase and use such materials of particular make or from a particular source which may in his opinion be necessary for proper and reasonable compliance with the specifications and execution of work.
- 2.3 (a) As and when required by the Owner/Consultant, the Contractor shall provide all facilities at site or at manufacture's works or in approved laboratory for testing of materials and/or workmanship. All the expenditure in respect of this shall be borne by the Contractor. The Contractor shall, when required to do so by the Owner/Consultant, confirm that the materials have been tested in accordance with requirements of the specifications.
 - (b) Neither the omission by the Owner/Consultant to test the materials nor the production of manufacturer(s) certificate, etc. shall affect the right of the Owner/Consultant to reject, after delivery, the materials found not in accordance with the specifications.

3.0 GATE PASSES



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All tools, plant and materials shall be brought by the Contractor to the works site through a covering note to be submitted in 3 copies. One copy of the covering note will be delivered to the security staff and one copy to the Owner/Consultant. The third copy shall be retained by the Contractor. The Contractor shall follow all rules and regulations for entry / exit of their men and materials in/from project site as framed by Owner/Consultant.

4.0 CONSTRUCTION SCHEDULE

If at any time, the Owner/Consultant is of opinion that the Contractor has fallen behind the approved construction schedule, the Owner/Consultant may, without any cost to Owner/Consultant, require the Contractor to take such steps as may be necessary to improve his progress, especially require him to employ overtime operations, increase the number of shifts, work on holidays and Sundays or increase the capacity of his construction plant and equipment and require him to submit evidence demonstrating the manner in which the Contractor proposes to comply with the construction schedule. Failure of the Contractor to comply with the above will be considered a failure to execute the work with due diligence.

5.0 CONTRACTOR TO BE LIABLE FOR ALL TAXES ETC.

The Percentage Rates quoted by the Contractor shall be inclusive of all labour, materials, tools and tackles necessary for executing the work and all other miscellaneous expenditure for/or incidental tools in connection with the execution of the contract including but not limited to all taxes & duties, custom duty, personnel and corporate tax etc. except GST. GST which will be paid extra as actual by the owner limited to the amount derived by the rate quoted by the bidder.

Further any statutory variations in respect of taxes & duties, if any, shall be governed by Clause 39.0 of the SCC.

Payment of taxes etc., is the responsibility of the Contractor and shall not be payable by HURL. The Contractor shall indemnify HURL against levy of any taxes, duties, etc., in regard to the contract and in the event of HURL being assessed for any of the said imports, the HURL shall have the right to recover the total amount so assessed from the Contractor's dues and the Contractor shall also be responsible for all costs or expenses that may be incurred by HURL in connection with any proceeding or Litigation in respect of the same.

6.0 ISSUE OF WORKING DRAWINGS

Approved working drawings marked "Good for execution/construction" shall be issued by Owner/Consultant to the Contractor progressively during the pendency of the contract. Sufficient quantum of workings drawings will be issued at the beginning. The Contractor on this account shall not be entitled to put forth any claim whatsoever.

7.0 COST OF TRANSPORT OF MATERIALS ISSUED BY OWNER

Cost of transport, loading, unloading etc. from Owner's stores to work site etc., will be on Contractor's account.

8.0 ROLE OF OWNER/CONSULTANT



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- 8.1 The Owner/Consultant shall have authority to stop the work, whenever such stoppage may become necessary to ensure the proper execution of the contract. He shall also have authority to inspect and reject all work and materials which do not conform to specifications, to direct the application of Contractor's forces to any portion of the work, as in his judgment is required, and to order the said force increased or diminished and to decide questions which arise in the execution of the work.
- 8.2 The Owner/Consultant reserve the right to suspend the work or part thereof at any time and no claim whatsoever on this account shall be entertained. In case of any clarification the Contractor may appeal to the Owner whose decision shall be final and binding thereupon.
- 8.3 The above inspection shall, however, not relieve the Contractor of his responsibilities in regard to defective materials or workmanship and the necessity for rectifying or replacing the same.
- 8.4 The judgment of Owner/Consultant for determining the category of an item not mentioned in the schedule shall be final.

9.0 SERVICE OF NOTICES OF CONTRACT

The Contractor shall furnish to the Owner/Consultant the name, designation and address of his authorized Agent for the purpose of service of notice(s) regarding all complaints, communications and references and shall be deemed to have been duly given to the Contractor if delivered to the Contractor or his authorized agent or left at or posted to the address so given and shall be deemed to have reached such address in the ordinary course of post or on the day on which they were so delivered or left. In the case of contract by partners, any change in the constitution of the firm shall be forthwith informed by the Contractor to the Owner/ Consultant.

10.0 CONTRACTOR'S GUARANTEE

The Contractor agrees to give the guarantee of his works in the following manner which shall remain valid till the validity of performance guarantee.

- i. All materials incorporated in the work shall be new and both workmanship and materials shall be of good quality.
- ii. Should, at a subsequent date, any inside honeycomb/hollowness be detected within a concrete member, he shall investigate other nearby sections for similar occurrence and shall rectify all these members by Pressure grouting at his own cost and as per direction of the Owner/ Consultant.
- iii. Should, any element of the structure be detected afterwards not exactly tallying with the working drawing, he shall re-do the element at his own cost and as per instruction of the Owner/Consultant.
- iv. Should, at a subsequent date, any materials or fittings or workmanship or any element of the structure be detected as of sub-standard quality he shall either remove the same and shall re-do at his own cost or shall accept an equitable deduction in the contract price should the Owner/ Consultant deemed it inexpedient to correct the work.
- v. All liquid retaining concrete structures shall be demonstrated about their efficiency or water tightness by filling the said structures with water and retaining it for 72 hours at



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his own cost. Should the result be found unsatisfactory he shall rectify the structures by pressure grouting at his own cost and as per direction of the Owner/Consultant.

vi. Should, at a subsequent date, the basement wall/floor been noted seeping/leaking he shall rectify the same by pressure grouting at his own cost and as per direction of the Owner/Consultant.

11.0 CONTRACTOR FULLY RESPONSIBLE FOR LAYOUT OF WORK

The Contractor shall remain fully responsible to provide detailed layout of different structures according to the coordinates and reduced levels incorporated in the working drawings by taking reference from the Bench Marks of both the coordinates and the reduced levels which shall be given at a convenient place in the works site by Owner/Consultant. The Contractor shall provide necessary protection to keep the Bench Marks Undisturbed throughout the pendency of the contract. The accuracy of detailed layout of any element of a structure shall remain exclusively with the Contractor. The Contractor shall have to maintain a number of after beams; Theodolite and levels instruments etc. in good working conditions at site for the above purpose throughout the pendency of the contract, and shall make them available to Owner/Consultant for their use.

12.0 NOTHING EXTRA FOR ADVERSE SUB-SOIL CONDITION

There may be variation in nature of sub-soil both horizontally and vertically. The Contractor shall have to take necessary precaution during excavation against any happening like collapsing of sides etc. Any slip or fall in excavation shall have to be cleared by the Contractor at his own cost. In case of excessive heaving, it shall have to be cut and refilled with lean concrete by the Contractor at his own cost. The Contractor shall have to adopt underwater work in case of occurrence of piping/quick conditions without any cost to Owner/Consultant.

13.0 R.C.C. ELEMENT SHALL BE INTEGRAL FINISHED

For all RCC elements, both underground and above ground, only new plywood and steel shuttering shall be used to produce the concrete surface reasonably plain and smooth which will be integrally finished surface. Any little unevenness shall be made good by rubbing with carborandum stones only. Unless otherwise mentioned, plastering will not be allowed to manipulate and make the surface plain and smooth.

If the surfaces after stripping off the shuttering are found to be contrary to the above conditions then the Contractor shall have to dismantle the member and re-do the same to attain the aforesaid surfaces at his own cost.

14.0 FABRICATION DRAWINGS FOR STRUCTURALS

- a) The CONTRACTOR shall prepare and submit fabrication drawings in triplicate for preliminary approval of CONSULTANT. Fabrication drawings shall be based on design drawings issued by CONSULTANT. One copy of these preliminary drawings duly corrected and signed wherever necessary shall be returned to CONTRACTOR for incorporation of the corrections. After incorporating the corrections, the CONTRACTOR shall submit in 8 (eight) copies of the drawings for final approval. Each drawing shall be accompanied by:
 - i) Bill of materials giving all details including sizes, numbers and weights.



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ii) Two copies of design calculations for the design of joints. All the joints shall be designed for full strength of members; unless otherwise specified.

Nothing extra shall be payable to Contractor for preparation of fabrication drawings, material lists design calculation etc.

Approval of fabrication drawings, however, will not absolve the CONTRACTOR of his responsibility for the safety and correctness of the fabrication details.

- iii) In case the CONTRACTOR wants to get the fabrication drawings prepared from other agencies, Owner/Consultant's approval for appointing such agencies shall be obtained by CONTRACTOR before appointing the agency. For this, CONTRACTOR must submit the credentials of the agency along with the request for approval.
- iv) The Contractor shall supply three (3) sets of as built drawings also, after completion of work but well before the submission of final bill.

15.0 CONTRACTOR SHALL SUBMIT BAR BENDING SCHEDULE

The Contractor shall prepare bar bending schedule from the detailed RCC working drawings supplied by Owner/Consultant for execution of work and nothing shall be paid on this account. Four copies of such bar bending schedule shall be made available to the Owner/Consultant for his approval and effecting payment there under.

16.0 CONTRACTOR'S RESPONSIBILITY FOR THE MANNER OF EXECUTION OF WORK

The Contractor shall be responsible for the manner and the method of executing the work. The work shall be subject to the approval of Owner/ Consultant from time to time for purposes of determination of the question whether the work is executed by the Contractor in accordance with the contract.

17.0 NO WORK SHALL BE UNDERTAKEN WITHOUT APPROVED WORKING DRAWINGS

No work shall be undertaken at Site by the Contractor until detailed approved working drawings marked "Good for execution/construction" for the same is issued by Owner/ Consultant. Any work done without the aforesaid working drawing shall be at the Contractor's own risk and costs.

18.0 CONTRACTOR SHALL KEEP FOUNDATION PITS/TRENCHES DRY

The Contractor, during the pendency of contract, shall keep in dry condition of pits, trenches, which are not yet back filled due to technical reasons, if not shall be Bail-out/Pump-out all accumulation at his own cost for the safety of the structure /element. During pumping, the Contractor shall have to ensure that 'Loss of Ground' does not occur. Other approved methods shall be undertaken by the Contractor to avoid 'Loss of Ground' if occurred, at his own cost.

19.0 NOTHING EXTRA FOR INTRICATE CONCRETE SHUTTERING OR REINFORCEMENT WORK



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Nothing extra shall be paid for any intricate concrete, shuttering or reinforcement work for foundations of equipment and machinery and for other foundation/superstructure works or for any delay inherent in concreting in small and thin sections in concrete or RCC works etc.

20.0 NOTHING EXTRA FOR REBATING ETC.

Nothing extra shall be paid in concrete/RCC works for all rebating, chamfering, grooving, sinking, trotting weathering, molding, etc. to accord with the details shown on the working drawings.

21.0 CONSTRUCTION JOINTS

- 21.1 In case of execution of massive concrete elements both in foundation and in superstructure and in some other locations as would be permitted except where specified in the working drawings, the work shall be carried out in one single operation without any break in concreting within time limit that would be specified by the Owner / Consultant without any additional cost to Owner/ Consultant.
- 21.2 All specified construction joints, either horizontal or vertical, in any element of concrete member shall be provided with shear keys of such dimensions as would be determined by the Owner/Consultant. Before adopting the next operation for the other half of the element these shear keys along with the entire surface of the joint shall be roughened and deepened to above 20 mm by chipping, washing and cleaning thoroughly. The Contractor shall provide cement slurry in sufficient quantity over the cleaned surface for proper bond as per the direction of Owner/Consultant. The Contractor shall not be entitled to any extra/payment; on this account.

22.0 SUBMISSION OF BILL

Contractor is to submit the bills and record of measurements in three (3) copies on approved proforma of Owner for works executed by him.

22.1 FOR R/A BILLS:

Contractor is to submit the bills and record of measurements complete in all respect duly certified by Owner/Consultant in three copies on approved proforma of Owner for works executed by him progressively.

22.2 MEASURMENT OF WORKS

Measurement of work shall be made in the units mentioned in the schedule of rates. The abbreviations used in the schedule of rates are mentioned in Attachment-IX of schedule of rates.

22.3 SUBMISSION OF FINAL BILL

The final bill complete in all respect shall be submitted after certified completion of work. The bill should be accompanied with the following documents:

- i. Job completion certificate.
- ii. No claim certificate on HURL's prescribed proforma.
- iii. Site clearance certificate.



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- Performance guarantee duly amended to cover certified maintenance period.
- v. Indemnity certificate towards labours payment and all other statutory payments.

No claim shall be entertained after receipt of final bill. Settlement of final bill shall be made within 1 (one) month period subject to furnishing of all required documents / clarification and extension of time, if any, by HURL's competent authority.

In case any claim with regard to the wages of any labour employed by Contractor for the subject job is pending/ reported, HURL shall be fully entitled to withhold payment of final bill pending finalisation of such claims.

23.0 PROVISION FOR MULTIFARIOUS CHECKING OF WORK

Before commencement of the actual concreting operation the position and layout of foundations, pedestals, inserts, pockets, recess, reinforcement and form work shall be checked repeatedly by Owner/Consultant. No claim whatsoever shall be entertained on this account. The level of foundations shall be accurately maintained as shown in the drawings or as directed by the Owner/Consultant. No padding, plastering or chipping shall be allowed for achieving the results.

24.0 DEFECT LIABILITY PERIOD

Defect Liability Period shall be 12 months from the date of certified Final completion.

25.0 NO COMPENSATION FOR ALTERATION IN OR RESTRICTION OF WORK TO BE CARRIED OUT

If at any time after the commencement of the work, Owner/Consultant shall, for any reason whatsoever, not require the whole work thereof as specified in the tender to be carried out, the Owner/Consultant shall give notice in writing of the fact to the Contractor who shall have no claim of any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of work in full, but which he did not derive in consequence of the amount of the work not having been carried out, neither shall be Contractor have any claim for compensation by reasons of any alternations having been made in original specifications, drawings and instructions which shall involve any curtailment of the work as originally contemplated.

26.0 ACTION AND COMPENSATION PAYABLE IN CASE OF BAD WORK

If it shall appear to the Owner/Consultant or his representative, that any work has been executed with unsound, imperfect or unskilful workmanship or with materials of any inferior description or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to at contracted for, or otherwise not in accordance with the contract, the Contractor shall, on demand in writing from the Owner/Consultant specifying the work/materials/articles complained, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require, or as the case may be, remove other unsuitable materials or articles so specified within a period specified by the Owner/Consultant at his own cost.

27.0 CLEARING, FILLING AND LEVELING OF SITE



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The site shown on the layout plan shall be cleared by the Contractor of all obstructions, loose stones, materials, rubbish of all kinds of bushes, trees, grass as well as brush wood. All holes/hollow, whether originally existing or produced by removal of loose stones or brush wood, shall be carefully filled up with earth, well rammed and leveled off as directed by the Owner/ Consultant. The Contractor will not be entitled to any payment in his regard.

28.0 CONTRACTOR TO COMPLY ALL LAWS

- 28.1 The contract shall be governed by the law in force in the Republic of India.
- 28.2 The Contractor shall comply with all laws etc. The Contractor shall be responsible to secure compliance with the Central and States Laws as well as the Rules, Regulations, by-laws and orders of the legal authorities and statutory bodies which are in force or as may be in force from time to time. He shall give to the Municipal Corporation Committees, police and other relevant authorities all such notices, etc. as may be required by law and obtain all requisite license for temporary constructions, enclosures, etc. and pay all fees, taxes and such other dues or charges which may be leviable on account of any of his operations in executing the works under this contract. Owner/Consultant shall not pay anything extra to the Contractor on this account. The Contractor shall also make good at his own cost, any damage done by him to any adjoining property, during execution of work.

29.0 CONTRACTOR TO USE THE MATERIALS ONLY AFTER THE APPROVAL OF OWNER

The Contractor shall use the materials only after the approval of Owner/ Consultant, before incorporation of the same in the works.

30.0 COMPLIANCE OF ENTIRE PROVISIONS IS OBLIGATORY TO CONTRACTOR

It shall always prevail, unless otherwise specifically stated, that the entire provisions of the Tender Document have been accepted for compliance by the Contractor without any reservation.

31.0 GENERAL

- 31.1 The location and general information regarding site on which the proposed work is to be executed is furnished in Attachment-I hereto.
- 31.2 Contractor shall acquaint himself with access to site, availability of local facilities such as railway siding, transport facilities, materials and labour and shall provide suitable allowances in his Bid, Contractor's quoted rate being firm, it should take into account all expenses likely to arise in this regard.
- 31.3 Contractor shall be deemed to have visited site and familiarized himself thoroughly with site conditions before submitting his Bid. Non-familiarity with site conditions will not be considered a reason either for extra claims or for not carrying out work in strict conformity with drawings and specifications.

32.0 DELIVERY AND DOCUMENTS

Delivery of the Goods shall be made by the Contractor in accordance with the terms specified by the Owner/Consultant in the schedule of requirements in Technical



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Specifications. and the special conditions of purchase, if any and the Goods shall remain at the risk of the Contractor until Delivery has been completed.

33.0 INCIDENTAL SERVICES

- 33.1 As specified in the special conditions of purchase, the Contractor may be required to provide any or all of the following services:
 - i) Supervision of on-Site assembly and/or of the supplied Goods.
 - iii) Performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Contractor of any warranty obligations under this Purchase Order, and
- 33.2 Price charged by the Contractor for the preceding incidental services, if not included in the contract price for the Goods shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Contractor for similar services.
- 33.6 At the request of Consultant or Owner, Contractor shall at his expense, dismiss from work and replace any such employee as Owner/Consultant, may deem incompetent or careless or whose continued employment is deemed inimical to the interest of the Owner/Consultant or against public interest.
- 33.7 Other conditions of work at Site shall be mutually discussed and settled.

34.0 WORK AND WORKMANSHIP GUARANTEE

- 34.1 Contractor shall make arrangements to provide at no extra charge all temporary approaches to and within the site, after obtaining prior approval of Owner/Consultant of the layout of such approaches.
- 34.2 To determine the acceptable standard of workmanship, Owner/Consultant may order Contractor to execute certain portions of work and services such as wall, flooring, joinery, finishes, roads and the like under the close supervision of Owner/Consultant. On approval, these items shall be labeled as guiding samples and work shall be executed to conform to these samples. These samples shall be prepared at the cost of Contractor.
- 34.3 Workmanship shall be of best possible quality and all the work shall be carried out by skilled workmen except for those which normally require unskilled persons. If the laws of local government, municipal or other authorities require employment of licensed or registered workmen of various trades, Contractor shall arrange to have the work done by such registered or licensed persons.
- 34.4 Workmanship shall be in accordance with the specifications, standards and codes which are part of this tender as well as the established engineering practices for this type of work. For any portion of work executed by Contractor and considered defective by Owner/Consultant, the Contractor shall have to take necessary remedial measures, to the complete satisfaction of Owner/Consultant, to make the defective good in order at his own cost without any liability to Owner/Consultant.

The Contractor shall be responsible for the proper workmanship and shall not be relieved of his obligation in this regard just because no objection was raised by Owner/ Consultant during the progress of work. The workmanship guarantee period will be 12 months from the date of final completion as a whole, certified by Owner.



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If any defects are found due to bad workmanship during this period, the Contractor shall undertake to rectify the same at his cost, most expeditiously. The workmanship guarantee for rectified portion of work shall commence from the date of rectification for a subsequent period of 12 months. The decision of Owner/Consultant regarding bad workmanship shall be final binding and conclusive.

The Contractor shall be required to submit the performance guarantee accordingly.

35.0 PRIORITY OF DOCUMENTS

The following is the order of priority in descending order. High priority document shall take precedence over low priority document in case of any conflict:-

- 1. Drawings
- 2. Schedule of Rates
- 3. Scope of work & Technical Specifications
- 4. Special condition of contract
- 5. Terms of Payment
- 6. General Conditions of Contract
- 7. Site working and safety conditions
- 8. Standards (Standards here shall mean National/ International Standards & Specifications).
- 9. Issue of Materials

36.0 WEATHER CONDITIONS

Owner/Consultant may order Contractor to suspend any work which in the opinion of Owner/Consultant may be subject to damage by prevailing weather conditions. No claim whatsoever on this account shall be entertained.

"It is presumed that the Contractor has familiarized himself with the weather conditions preailing in the area therefore in such weather parameters if it appears to the Engineer –in –charge (EIC) that certain weather condition may damage the work or specified quality of the work can be achieved without stoppage of the work, the EIC in such conditions may require the Contractor to stop the work till such time as he thinks fit and appropriate. It is understood by the contractor that no compensation will be admissible on this count. However in exceptional circumstances at the recommendation of the EIC, Consultant/owner may grant reasonable extension of Time.

37.0 TIME SCHEDULE AND PROGRESS REPORTING

37.1 Time schedule network/bar chart.

- 37.1.1 Together with the Work Order/Contract confirmation, Contractor shall submit to Owner/Consultant, his time schedule regarding the documentation, supply of materials as well as information about of his Subcontracts to be placed with their parties, including the dates on which Contractor intends to issue such Subcontracts.
- 37.1.2 The time schedule will be in the form of a network or a bar chart clearly indicating all main or key events regarding documentation, supply of materials, delivery and site fabrication, erection, inspection, testing and completion.



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- 37.1.3 The original issue and subsequent revisions of Contractor's time schedule and or Subcontractor's time schedules shall be sent to Consultant in two copies (of which one shall be in Soft copy) and two copies to Owner.
- 37.1.4 The time schedule network/bar chart shall be updated at least every fortnight.

37.2 **Progress Trend Chart/Monthly Report**

- 37.2.1 Contractor shall report weekly to Owner/Consultant the progress of the execution of Work Order/Contract and achievement of targets set out in time bar chart.
- 37.2.2 The progress will be expressed in percentages shown in the progress trend chart.
- 37.2.3 The first issue of the progress trend chart will be forwarded together with the time bar chart along with the Work Order confirmation.
- 37.2.4 The fortnightly reporting will bear the updating of the progress trend chart.
- 37.2.5 All reporting will be done on e-mails and hard copies wherever required will follow.

38.0 INSTRUCTIONS, DIRECTIONS AND CORRESPONDENCE

- 38.1 The work described in Work Order is to be executed according to the standards, data sheets, tables. Specifications and Drawings attached hereto and/or enclosed with the Work Order itself and according to all conditions both general and specific enclosed with the Work Order, unless any or all of them shall have been modified or cancelled in writing as a whole or in part.
 - All instructions and orders to Contractor shall, excepting what is herein provided, be i) given by Owner/Consultant.
 - All the work shall be carried out under the direction of and to the satisfaction of ii) Owner/Consultant.
 - iii) All communications including technical/commercial clarifications and/or comments shall bear reference to the Work Order /Contract.
 - Invoice for payment against Work Order /Contract shall be addressed to Owner/ Consultant.
 - V) The WORK Order/Contract number shall be shown on all invoices, communications, packing lists, containers and bills of lading etc.
- 38.2 All correspondence from Contractor/Contractor shall be forwarded in duplicate (2 copies) to CONSULTANT and 02 copies to OWNER at following addresses:

CONSULTANT	OWNER
Projects & Development India Ltd.,	Hindustan Urvarak & Rasayan Ltd.,
Project Management Department	Core-2, 2 nd Floor, Scope Minar,
P.D.I.L Bhawan, A-14, Sector-1, Noida	Laxmi Nagar District Centre, Delhi-92
Kind Attention : Mr. Sumit Kumar	Kind Attention: Mr. Manish Goyal
Project Manager	Senior Project Manager



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Tel no.: 0120-2544063, Extn. 374

Fax no.: +91-120-2529801

Tel no.: 011-22502267

Email: goyalm@hurl.net.in

E-mail: sumit.kumar@pdilin.com

38.3 Correspondence on technical and commercial matters shall be dealt with in separate letters for each Work Order /Contract and each copy of the letter shall be complete with all Annexures. Wherever possible, correspondence should be through e-mail to the above personnel so as to save time.

38.4 Correspondence for expediting and inspection shall be done directly with inspector with a copy to consultant & owner at above mentioned address.

39.0 STATUTORY VARIATION IN TAXES AND DUTIES

- 39.1 If any new taxes or duties (including any increase in rate of any existing taxes or duties) are levied in India after the date of submission of bids on any payments due to the CONTRACTOR under the CONTRACT other than tax on income, wealth or profits of the CONTRACTOR, the OWNER shall reimburse the CONTRACTOR the amount of such taxes or duties lawfully paid and borne by the CONTRACTOR against proof of payment. However, this is applicable within the GUARANTEED COMPLETION DATE only and shall not be reimbursed by OWNER during the delayed contractual project completion attributable to CONTRACTOR"S account.
- 39.2 If any existing taxes or duties are withdrawn or the rate is decreased after the date of submission of the bids on any payments due to the CONTRACTOR under the CONTRACT other than tax on income, wealth or profits of the CONTRACTOR, the OWNER shall be entitled to discount in the amount payable to the CONTRACTOR of amount equivalent to the amount of such taxes or duties. This is applicable within the GUARANTEED COMPLETION DATE and also during the delayed contractual Project completion.
- 39.3 In case of delayed completion beyond the GUARANTEED COMPLETION DATE even though extension of completion time is allowed by OWNER, for reasons solely attributable to Contractor, all extra costs on account of changes of statutory regulations/ acts, or increase in price on any other account including price variation clause, if any, shall not apply to the Contract price and shall be borne by the CONTRACTOR.

However, any decrease in taxes and duties during the delayed period shall be passed on to the OWNER.

40.0 QUALITY ASSURANCE / QUALITY CONTROL

- 40.1 Bidder shall include in his offer the Quality Assurance Programme containing the overall quality management and procedures which is required to be adhered to during the execution of contract. After the award of the contract detailed quality assurance programme shall be prepared by the Contractor for the execution of contract for various works which will be mutually discussed and agreed to.
- 40.2 The Contractor shall establish document and maintain an effective quality assurance system outlined in recognized codes.
- 40.3 Quality Assurance System plans/procedures of the Contractor shall be furnished in the form of a QA manual. This document should cover details of the personnel responsible for



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the Quality Assurance, plans or procedures to be followed for quality control in respect of Design, Engineering, Procurement, Supply, Installation, Testing and completion in all respect till final acceptance by Owner. The quality assurance system should indicate organizational approach for quality control and quality assurance of the construction activities, at all stages of work at site.

- 40.4 The Owner/Consultant or their representative shall reserve the right to inspect/witness, review any or all stages of work at shop/site as deemed necessary for quality assurance.
- 40.5 The Contractor has to ensure the deployment of quality Assurance and Quality Control Engineer(s) depending upon the quantum of work.

 This QA/QC group shall be fully responsible to carry out the work as per standards and all code requirements. In case Engineer-in-charge feels that Contractor's QA/QC Engineer(s) are incompetent or insufficient, Contractor has to deploy other experienced Engineer(s) as per site requirement and to the full satisfaction of Engineer-In-Charge.
- 40.6 In case Contractor fails to follow the instructions of Engineer-in-charge with respect to above clauses, next payment due to him shall not be released unless until he complies with the instructions to the full satisfaction of Engineer-in-charge.
- 40.7 The Contractor shall adhere to the approved quality assurance system

41.0 HEALTH SAFETY AND ENVIRONMENT (HSE) MANAGEMENT

The Contractor, during entire duration of the Contract, shall adhere to HSE requirement as per Specification enclosed in the Bidding Document.



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SECTION-A: COMMERCIAL

EXHIBIT-1 EXPERIENCE CRITERIA

0	11.07.2017	FOR TENDER	SK	KJ	RRK
REV.	DATE	PURPOSE	PREPARED	REVIEWED	APPROVED



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EXHIBIT-1: EXPERIENCE CRITERIA

EXHIBIT-1

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

EXPERIENCE CRITERIA

Bidder shall furnish their Experience details line with Experience Criteria mentioned under	s with reference to the work, which pre-qualify them in er Clause 8.0 of "Instructions to Bidders"
(MARK √ FOR APPLICABILITY IN BOX	

1.0 EXPERIENCE AS CONTRACTOR

SL. NO.	DESCRIPTION	DETAIL	_S
1.	Name of Project, Location (Executed by Bidder)		
2.	Description of work		
3.	Name of Owner, Postal Address, Phone / Fax No. / E-mail		
4.	Name of Consultant / Postal Address, Phone / Fax No. / E-mail.		
5.	 Project Status Date of Award Scheduled Mechanical completion date. Actual Mechanical completion date Actual Project completion date (handover) Delay in months (if any) Reasons for delay (if any) 		
6.	Scope of work executed by Bidder's organization	Land Development Works	
		Civil, Structural	



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EXHIBIT-1: EXPERIENCE CRITERIA

		Works		
7.	Completion Status Specify		Date	
			Act.	Sch.
		- Completion Date		
		Whether completion certificate enclosed		
		YES NO		
7.1	LD imposed/ Bonus claimed	YES/NO; if yes, brief the re	eason:	
8.0	Document Furnished			
8.1	Copy of work order / Contract Agreement enclosed	YES NO		
8.2	Documentary proof from the End User/OWNER regarding satisfactory performance indicating the period of completion.	YES NO		
Note:		have of Designate which the		

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- Bidder shall furnish the experience details as above of Projects which they consider suitable for their pre-qualification. OWNER / CONSULTANT reserve the right not to evaluate any other Project details.
- 2. Bidder to note that this exhibit form shall be filled as per the Proformas as stated, along with wherever applicable, copies of work order and completion certificates.
- 3. Bidder to note that non-submission of relevant supporting documents may lead to rejection of their bid. It is to be ensured that all relevant supporting documents shall be submitted alongwith the bid in the first instance itself. Pre-qualification may be completed based on the details so furnished without seeking any subsequent additional information.

For and on behalf of		
Stamp & Signature	:	
Name	:	
Designation	:	
Date	:	



PROJECTS & DEVELOPMENT INDIA LIMITED

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SECTION-A: COMMERCIAL

EXHIBIT-2

FINANCIAL CRITERIA

0	11.07.2017	FOR TENDER	SK	KJ	RRK
REV.	DATE	PURPOSE	PREPARED	REVIEWED	APPROVED



EXHIBIT-2: FINANCIAL CRITERIA

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EXHIBIT-2

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

FINANCIAL CRITERIA

Bidder shall furnish details with reference to the work, which pre-qualify them in line with Financial Criteria mentioned under Clause 8.0 of "Instructions to Bidders".

1.0 DETAILS OF PROJECT REFERENCES AS PER CLAUSE 8.0 OF "INSTRUCTIONS TO BIDDERS"

SL. NO.	DESCRIPTION	PROJECT – 1, 2 etc. (Separate sheets for each Project)
1.	Project name and description	
2.	(a) Awarded contract value (INR)	
	One completed Work with contract value not less than INR 13.60 Crore OR	
	Two completed Works each works with contract value not less than INR 8.50 Crore	
	OR Three completed Works each works with contract value not less than INR 6.80 Crore	
	(b) Final executed contract value (INR)	
3.	Name of Owner	
	(a) Name and address of Owner's contact person	
	(b) Telephone and Fax No.	
	(c) Mobile No.	
	(d) Email No.	
4.	(a) Date / month / year of award / commencement of Project	
	(b) Date / month / year of Scheduled Completion of the Project.	
	(c) Date / month / year of Actual Completion of the Project.	



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EXHIBIT-2: FINANCIAL CRITERIA

5.	Document Furnished	YES/NO
5.1	Copy of work order / Contract Agreement enclosed	
5.2	Completion/Acceptance certificate identifying the successful commissioning of project.	

2.0 ANNUAL TURNOVER

SL. NO.	FINANCIAL YEAR	TURNOVER IN INR
1	FY: 2015-2016	
2	FY: 2014-2015	
3	FY: 2013-2014	

3.0 NET WORTH

Net worth as on the last day of the financial year ending 31st March 2016:	:
Whether copies of balance sheet and annual turnover statements for the above three financial years submitted	YES / NO

4.0 SOLVENCY CERTIFICATE

S.NO.	NAME & ADDRESS OF BANK	ISSUE DATE	AMOUNT (INR)

Note:

- Bidder shall furnish the experience details as above of Projects which they consider suitable for their pre-qualification. OWNER / CONSULTANT reserve the right not to evaluate any other Project details.
- 2. Bidder to note that this exhibit form shall be filled as per the Proformas as stated, along with wherever applicable, copies of work order and completion certificates.



& DOUNDANT WALL NEFAIN	DOC NO	
(AGE-I) AT BARAUNI, BIHAR.	DOC. NO.	

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EXHIBIT-2: FINANCIAL CRITERIA

- 3. The bidder shall attach fresh solvency certificate issued by his banker. The solvency certificate shall not be more than six months old from the date of issue of NIT OR minimum credit ratings of "A" from ICRA/CRISIL etc OR equivalent reputed institutions, OR financing/credit limits from bank of value not less than INR 6.80 Crore valid as on date of issue of ITB.
- 4. Bidder to note that non-submission of relevant supporting documents may lead to rejection of their bid. It is to be ensured that all relevant supporting documents shall be submitted alongwith the bid in the first instance itself. Pre-qualification may be completed based on the details so furnished without seeking any subsequent additional information.

For and on behalf of		
Stamp & Signature	:	
Name	:	
Designation	:	
Date	:	



BOUNDARY WALL REPAIR		
GE-I) AT BARAUNI, BIHAR	DOC. NO.	RE

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TENDER ACCEPTANCE LETTER

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

TENDER ACCEPTANCE LETTER (To be given on Company Letter Head)

To,	,	Date:
	b: Acceptance of Terms & Conditions of Tender. T No:	
Na	ame of Tender/Work:-	
Dea	ear Sir,	
1.	I/We have downloaded/obtained the tender document(s) for the above m 'Tender/Work' from the web site(s) namely:	nentioned
	as per your advertisement, given in the above mentioned website(s).	
2.	I/ We hereby certify that I/ we have read the entire terms and conditions of the	ne tender

- 2. I/ We hereby certify that I/ we have read the entire terms and conditions of the tender documents (including all documents like annexure(s), schedules(s), etc.,), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions/ clauses contained therein.
- 3. The corrigendum(s) issued from time to time by your department/ organization too has also been taken into consideration, while submitting this acceptance letter.
- 4. I / we hereby unconditionally accept the tender conditions of above mentioned tender document(s) corrigendum(s) in its totality / entirety.
- 5. In case any provisions of this tender are found violated, then your department/ organization shall without prejudice to any other right or remedy be at liberty to reject this tender/ bid including the forfeiture of the full said Earnest Money Deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)



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COMMERCIAL QUESTIONNAIRE

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

Note:

- 1) The Bidder shall submit reply to each query.
- 2) The Bidder's reply/ confirmation as furnished in the Commercial Questionnaire (CQ) shall supersede the stipulation mentioned else where in the bid.

SI. No.	OWNER'S/PDIL'S QUERY	BIDDER'S REPLY / CONFIRMATION
1.	Please confirm that Master Index and copies of all technical and commercial amendments/addendums if any issued, duly signed and stamped on each page as a token of having received and read all parts of the bidding document and having accepted and considered the same in preparing their bid.	
2.	Please confirm that all pages of the Bid have been numbered in sequential manner.	
3.	Please confirm that you have studied complete Bidding Document including Pre-Qualification Criteria, Technical and Commercial Part and your Bid is in accordance with the requirements of the Bidding Document.	
4.	Please confirm Bid Submission as per tender i.e. in Single Phase Two Bid System.	
5.	Please confirm that the Price Part does not include any terms and condition. In case any terms and condition is mentioned in the price part, the same shall be treated as null and void.	
6.	Price confirmation copy: Please confirm a Photocopy of the Schedule of Price, to be submitted strictly as per Part-IV of Section-B, Technical, Percentage Rates being blanked out and in place indicating "Quoted" against each head, shall be submitted duly signed and stamped as confirmation to quoted rate failing which bid may be rejected. However, Bidder shall not hide the percentage of taxes and duties considered in the priced bid.	
7.	Please confirm your compliance to total scope of work mentioned in the Bidding Document. CONTRACTOR's scope shall include supply of all materials and services required for completion of Work irrespective of whether such materials and services are mentioned in the Bidding Document or not.	
8.	Please confirm your acceptance for Time Schedule as mentioned in Instructions to Bidders.	



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SI. No.	OWNER'S/PDIL'S QUERY	BIDDER'S REPLY / CONFIRMATION
9.	Please confirm your acceptance for Payment Terms as per Bidding Documents.	
10.	Please confirm that your bid is valid for 90 days from the date of opening of Technical and Unpriced Commercial Bid.	
11.	Please confirm EMD Validity as Bid Validity (90 Days) plus 02 Months.	
12.	Please confirm Damages for delay in completion as per Article-25 of General Condition of Contract.	
13.	Please confirm Guarantee/Warranties as per Article-11 of General Conditions of Contract (GCC).	
14.	Please confirm that your quoted price/rate includes following :-	
	i) All type of taxes / levies as per provisions of Bidding Document.ii) Insurance as per provision of Bidding Document.	
15.	Please confirm that your Bid is substantially responsive to the requirements of the Bidding Document and you have not stipulated any material deviation and submitted all details as specified in the Bidding Document.	
16.	Please confirm that adequate numbers of construction equipments, tools, tackles, etc. have been proposed which will be sufficient to complete the work as per the time schedule.	
17.	Please confirm that you have proposed adequate project / site organization with qualified supervisory personnel having sufficient experience.	
18.	Please confirm that all costs resulting from safe execution of Work, such as safety induction, use of protective clothing, safety glasses and helmet, safety precaution taken during monsoon, or any other safety measures to be undertaken by the CONTRACTOR for execution of Work are included in the Lump sum Price.	
19.	Please confirm that all safety rules & regulations as mentioned in Bidding Document or notified at later date by OWNER during execution shall be adhered by CONTRACTOR.	
20.	The CONTRACTOR shall include safety rules & regulation and apply the same during the execution of the contract. Contractor shall also follow the safety guidelines of OWNER during the execution period of the contract.	



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SI. No.	OWNER'S/PDIL'S QUERY	BIDDER'S REPLY / CONFIRMATION
21.	Please confirm the following :-	
	"The planning schedule, manpower deployment schedule, construction equipment deployment schedule etc. submitted by the bidder with his bid are indicative and shall not be basis for extra compensation in case actual needs are higher.	
	Detailed planning schedule developed by CONTRACTOR after Contract award may be subject to fluctuations depending upon actual progress of the project and available Work front.	
	Co-ordination and making available by CONTRACTOR of all staff, manpower, construction equipment, tools, cranes, etc. and materials as required for a timely completion of all Work as per OWNER's construction and priority schedule and in accordance with the available Work front are to be included in the pricing".	
	Notwithstanding the above provision, the bidder shall submit these details in accordance with the volume of work, which may be reviewed and commented by us during pre award stage /post award stage.	
22.	Please note that the scope of this bid package is Execution / Land Development / Repair of Boundary Wall / Demolition / Dismantling within / outside the battery limits of existing plant for proposed Ammonia-Urea Complex at Barauni, Bihar. Scope also includes providing all labour, materials except if indicated in Schedule of Rates, supervision, scaffolding, construction equipment, tools, tackles and plants, supplies, transportation, all incidental items though not indicated or specified, but reasonably implied or necessary for successful completion of the work including Contractor's supervision strictly in accordance with the "Good for Construction" Drawings to be supplied progressively by the Owner/ Consultant, "Technical Specifications" and "Schedule of Rates" of this Tender on Item Rate basis. Sampling & testing of material & equipment shall be done as per relevant clauses of BIS & shall not be paid extra. The contractor shall preferably establish a laboratory at site for all relevant site test as per BIS requirements. The nature of work shall generally involve earth work in grading and levelling of the site area by excavation and filling with available / imported selected good earth under desired compaction, dewatering, shoring, strutting, etc disposal of excavated surplus earth/ materials, breaking, concreting including reinforcements and formwork, fabrication and	



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SI. No.	OWNER'S/PDIL'S QUERY	BIDDER'S REPLY / CONFIRMATION
	slabs, beams. The work also includes dismantling and/or demolishing of existing PCC/RCC, flooring, plastering, brick masonry, any sort of roofing with water proof treatment works including stacking separately serviceable and disposal of unserviceable materials & rebuilding as per requirements. Scope also includes preparation of Bar Bending Schedule for the reinforcements including getting them Approved from the Owner/ Consultant.	
23.	The safety measures as mentioned in Tender Document/GCC/SCC shall not be considered as limitative. The CONTRACTOR will be required to develop their stringent safety measures and submit the same to Engineer-in - Charge with the provision of a dedicated safety group closely monitoring the construction activities in all working shifts.	
24.	Please confirm the following that, a photocopy of the documents listed below has been enclosed in the bid:- 1. PAN Number 2. TIN Number 3. PF/ESI Number 4. GST Number 5. Labour Licence Registration Number 6. Latest Income Tax Clearance Certificate / ITR 7. Audited Balance Sheets	
25.	Please confirm the following: 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.	

For and on behalf of	:	
Stamp & Signature	:	
Name	:	
Designation	:	
Date		



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EXCEPTIONS / DEVIATIONS

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

Bidder shall either stipulate in this form

- 1. We make no exception/deviation to this bid or
- 2. This bid is subject to the following exception/deviations and fill in the below

SI. No	Section No. of bid doc.	Page No.	Clause No.	Article , Paragraph No.	Requirement	Exception/ Deviation
1						
2						
3						

NOTE:

- 1. If unavoidable, Bidder may stipulate deviations to the requirements of the Bidding Document only in this format.
- 2. Bidder shall furnish Technical and Commercial deviations, if any, separately.
- 3. Any deviations stated elsewhere in the bid shall not be taken into account and may render the bid non-responsive and liable to be rejected.

For and on behalf of	:	•••••
Stamp & Signature	:	
Name	:	
Designation	:	
Date	:	



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DETAILS OF SIMILAR WORKS EXECUTED

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

NAME OF THE PROJECT: BIDDER TO FILL

SL. NO.	FULL POSTAL ADDRESS OF CLIENT AND NAME OF OFFICER IN-CHARGE WITH PHONE/CELL NO AND E-MAIL	DESCRIPTION OF THE WORK	VALUE OF CONTRACT	DATE OF COMMENCEMENT OF WORK	SCHEDULED COMPLETION PERIOD	ACTUAL COMPLETION DATE	REMARKS

Note: 1) Description of work should be in detail.

2) Please also indicate the major problems if any, faced during construction of works.

STAMP & SIGNATURE OF BIDDER	: <u></u>
NAME OF BIDDER	:
DATE	:



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CURRENT COMMITMENTS

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

SL. NO.	DESCRIPTION OF WORK	FULL POSTAL ADDRESS OF CLIENT & NAME OF OFFICER IN CHARGE	CONTRACT VALUE	DATE OF COMMENCE MENT OF WORK	SHEDULED COMPLETION PERIOD	% AGE COMP. AS ON DATE	EXPECTED DATE OF COMPLETION	REMARKS

STAMP & SIGNATURE OF BIDDER	·
NAME OF BIDDER	:
DATE	:



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DEPLOYMENT SCHEDULE FOR SUPERVISORY PERSONNEL

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

SL. NO.	DESCRIPTION	DEPLOYMENT SCHEDULE						TOTAL
		M1	M2	М3	M4	M5	М6	
1.	PROJECT MANAGER							
2.	CONSTRUCTION MANAGER							
3.	PLANNING ENGINEER							
4.	CIVIL & STRUCTURAL ENGINEER							
5.	SUPERVISORS							
6.	ADMINISTRATION MANAGER							
7.	WAREHOUSE PERSONNEL							
8.								
9.								
10.								
11.								
12.								
13.								
14.								

NOTE: Bidder may add more personnel as per job assessment / experience

STAMP & SIGNATURE OF BIDDER	:
NAME OF BIDDER	÷
DATE	:



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DEPLOYMENT SCHEDULE FOR CONSTRUCTION EQUIPMENT / DECLARATION FOR MINIMUM DEPLOYMENT OF CONSTRUCTION EQUIPMENTS

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

SL. NO.	DESCRIPTION	CAPACITY		DEPLOYMENT SCHEDULE					TOTAL
			M1	M2	М3	M4	M5	M6	
1.	CRANES								
2.	DIESEL GENERATORS								
3.	WELDING MACHINE								
4.	TRACTORS								
5.	TRAILERS / TRUCKS								
6.	DUMPERS								
7.	EXCAVATORS								
8.	VIBRATOR								
9.	COMPACTORS								
10.	OTHER TOOLS & TACKLES								
11.									
12.									
13.									
14.									

NOTE: Bidder may add more Equipments as per job assessment / experience

STAMP & SIGNATURE OF BIDDER	<u> </u>
NAME OF BIDDER	:
DATE	:



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DEPLOYMENT SCHEDULE FOR CONSTRUCTION EQUIPMENT / DECLARATION FOR MINIMUM DEPLOYMENT OF CONSTRUCTION EQUIPMENTS

DECLARATION FOR MINIMUM DEPLOYMENT OF CONSTRUCTION EQUIPMENTS

SL. NO.	DESCRIPTION	CAPACITY	MINIMUM NOS.	DURATION (IN MONTHS)
1.	CRANES	50 T	01 no.	As per site requirement
2.	TRACTORS / TROLLEY	2.5 m ³	10 nos.	As per site requirement
3.	TRAILERS / TRUCKS	1000 CFT	10 nos.	As per site requirement
4.	DUMPERS	1000 CFT	25 nos.	As per site requirement
5.	POCLAIN EXCAVATORS	Bucket Size 1 cu. m.	03 nos.	As per site requirement
6.	VIBRO ROLLERS	-	02 nos.	As per site requirement
7.	MINI BATCHING PLANT	5 cu. m / hr	01 nos.	As per site requirement

NOTE: Bidder to deploy minimum equipments during the contractual / execution period as per above list for which either the bidder should be in possession of the above equipments or shall submit undertaking along with documentary proof of tie-up for hiring equipments as per above list from equipment owners.

STAMP & SIGNATURE OF BIDDER	:
NAME OF BIDDER	:
DATE	:



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)

DETAILS OF EQUIPMENT PROPOSED FOR TENDERED WORK

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

	DETAILS OF PROPOSED EQUIPMENTS, TOOLS & TACKLES								
The bi	The bidder shall submit the details of construction equipments, Tools & tackles etc. in the following format, proposed to be deployed for this works.								
SI.	EQUIPMENTS LIST REQUIRED TO BE DEPLOYED		STATUS OF EQUIPMENT		SCHEDULE	SCHEDULED	REMARKS		
No.	Description of Equipment	Make	Year	Capacity	Own by Contractor	If on Hiring (Give Detail Address)	DEPLOYMENT DATE AT SITE	COMPLETION DATE OF WORK	
Nete	1 la 222 et anulament curt to la	الدام المصالما	dawahali !:	l'agta tha agree	a af hisisas as i i i		and the clatter from	<u> </u>	
тиоте :	Note: 1. In case of equipment are to be hired, bidder shall indicate the source of hiring and enclosed and enclose the consent the letter from such sources.								

NOTE: Bidder may add Equipments as per job assessment / experience.

SIGNATURE OF BIDDER:
NAME OF BIDDER :
COMPANY SEAL :

^{2.} Bidder shall clearly indicate the expected data of availability of owned / hired equipment.



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CONTENTS OF BID & CHECK LIST

SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

Bidder is requested to fill this check list and ensure that all details /documents have been furnished under relevant section as called for in the Bidding Document duly filled in, signed & stamped.

Please tick the box and ensure compliance:

SECTION-I: PRE-QUALIFICATION BID: (Refer Clause 8.0 of Instructions to Bidders)

S.NO.	DESCRIPTION	SUBMITTED
i)	Letter of submission	
ii)	Pre Qualification Criteria in favour of Experience Criteria as per Exhibit-1 along with Copies of Work Orders, Certificates from End User/OWNER and completion certificates in support of prequalification requirement.	
iii)	Pre Qualification Criteria in favour of Financial criteria as per Exhibit-2 along with copies of Work Orders, Completion/ Acceptance certificates and Annual audited Report for the last three financial years. Annual Reports shall be a verifiable statement of annual accounts certified by a Chartered Accountant or Public Accountant in the form of printed annual reports or similar document.	
iv)	Solvency Certificate as per Annexure-1.18. Date of Issue of this certificate should not more than six months old from the date of issue of NIT.	
v)	A declaration shall be submitted as per Annexure-1.14 to the effect that Bidder have or had not been banned or blacklisted/del-listed by any PSU / Government Organizations.	

SECTION-II: TECHNICAL AND COMMERCIAL BID:

S.NO.	DESCRIPTION	SUBMITTED
i)	Photocopy : Earnest money Deposit (EMD) and Integrity Pact	
ii)	Tender Acceptance Letter as per Annexure-1.1	
iii)	Commercial Questionnaire as per Annexure-1.2	
iv)	Exception / Deviation as per Annexure-1.3	
v)	Details of Similar Works Executed as per Annexure-1.4	
vi)	Current Commitments of the Bidder as per Annexure-1.5	
vii)	Deployment Schedule of Supervisory Personnel as per Annexure-1.6	



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CONTENTS OF BID & CHECK LIST Page 2 of 2

S.NO.	DESCRIPTION	SUBMITTED				
viii)	Deployment Schedule of Construction Equipment / Declaration For Minimum					
	Deployment Of Construction Equipments as per Annexure-1.7					
ix)	Details of Equipment Proposed to be used for this work as per Annexure-1.8					
x)	Contents of Bid and Check List as per Annexure-1.9					
xi)	Power of Attorney of Bid Signatory from the Competent Authority					
xii)	Price confirmation copy - A Photocopy of the Schedule of Prices, to be submitted strictly as per Part-IV of Section-B, Technical , prices being blanked out and in place indicating " Quoted " against each head, shall be submitted duly signed and stamped. However, Bidder shall not hide the percentage of taxes and duties considered in the priced bid.					
xiii)	Master Index and copies of all technical and commercial amendments/addendums if any issued, duly signed and stamped on each page as a token of having received and read all parts of the bidding document and having accepted and considered the same in preparing their bid as per Annexure-1.16.					
xiv)	Exceptions/Deviations					
	The OWNER/ CONSULTANT wishes to receive fully compliant bids. Exception/Deviations may only be made in relation to requirements of OWNER/ CONSULTANT, which the BIDDER feels unable to comply with under any circumstances or at any price. If the BIDDER wishes to make any exception/deviations, this must be done by listing the full details of each exception/deviation in Annexure-1.3. Unless an entry appears in the list of exception/deviations in Annexure-1.3, OWNER/ CONSULTANT will assume and consider that BIDDER has no exceptions or deviations to the Tender Documents					
	Schedule of Deviations (if any) to the commercial and Technical bid documents, shall be submitted separately, as per Annexure-1.3. Also, Technical deviations must be given separately for each discipline.					
xv)	Any other information required in the Bidding Documents or considered relevant by the Bidder.					
xvi)	EFT Details as per Annexure-1.19					
xvii)	Financial Capability of Bidder as per Annexure-1.21					
	d on behalf of : & Signature : ation :					



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TERMS OF PAYMENT

SECTION-A: COMMERCIAL

ATTACHMENT - 1.10

TERMS OF PAYMENT

0	11.07.2017	FOR TENDER	SK	KJ	RRK
Р	31.05.2017	FOR TENDER	SK	KJ	RRK
REV.	DATE	PURPOSE	PREPARED	REVIEWED	APPROVED



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TERMS OF PAYMENT

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TERMS OF PAYMENT

TERMS OF PAYMENT

1.0 FINANCIAL GUARANTEE FOR PERFORMANCE

The contractor shall provide financial guarantee within 15 days of award of work for due & faithful performance of the contract as per Article 6 of General Conditions of Contract.

2.0 PAYMENT TERMS

Following terms of payment shall be applicable:

2.1. MOBILIZATION ADVANCE

Mobilization Advance not exceeding 10% of contract value shall be payable on submission of Bank Guarantee for the equivalent amount from a Nationalized / Scheduled Bank in the prescribed proforma, subject to furnishing the Performance Bank Guarantee. An interest @ 10% per annum shall, however, be charged on the above Mobilization Advance till it is recovered. Recovery of this Advance shall be made @ 15% from each bill so that full Mobilization Advance including interest is recovered by the time 75% work is done. The interest shall be calculated on the advance up to the date of release of payment(s). Mobilization Advance shall be paid only on acceptance of LOI/Work Order and establishment of Site Office by Contractor. The payment of Mobilization Advance shall be released with certification by Consultant/Owner.

2.2. RUNNING ON ACCOUNT PAYMENT

- 90% against value of actual work done shall be paid against running bills within 10 days of certification by OWNER/CONSULTANT after recovery of the following:
 - Mobilization Advance as indicated above.
 - Statutory deduction such as Income-Tax as applicable.
 - Any other recovery if become due.
- Balance 10% (Retention Money) shall be released along with final bill.
- 2.3. The running on A/c Bills shall be submitted on monthly basis.

2.4. RELEASE OF Ist R/A BILL



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TERMS OF PAYMENT

Payment will be released against Ist R/A bill only on submission of following documents by contractor to the indenting department.

- i. Financial Guarantee for Performance
- ii. Labour License (as per statutory requirements)
- iii. EPF Code Registration number with RPFC/ARPFC
- iv. Insurance Contractor All Risk (CAR) Policy
- v. Workmen compensation policy

2.5. SUBMISSION OF FINAL BILL

The final bill complete in all respect shall be submitted after certified completion of work. The bill should be accompanied with the following documents:

- i. Job completion certificate.
- ii. No claim certificate on HURL's prescribed proforma.
- iii. Site clearance certificate.
- iv. Performance guarantee duly amended to cover certified maintenance period.
- v. Indemnity certificate towards labours payment and all other statutory payments.

No claim shall be entertained after receipt of final bill. Settlement of final bill shall be made within 1 (one) month period subject to furnishing of all required documents / clarification and extension of time, if any, by HURL's competent authority.

3.0 PRICE

The prices shall be firm during the entire contract period including all extensions granted on whatsoever ground may be.

4.0 INSTRUCTION FOR INVOICING & PAYMENT DOCUMENTATION

4.1. INVOICING

Invoicing shall be in compliance with the stipulations of the Work Order and the following instructions. Contractor is liable for all costs arising from noncompliance with the instructions.

As far as possible, description of Works in invoice shall match the description in Work Order. **Invoice for payment shall be addressed to Owner.**

The invoices shall be issued in the name of:

HINDUSTAN URVARAK & RASAYAN LIMITED, CORE-2, 2nd FLOOR, SCOPE MINAR, LAXMI NAGAR DISTRICT CENTRE, DELHI-92



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TERMS OF PAYMENT

ATTN: MR. MANISH GOYAL

SENIOR PROJECT MANAGER TEL NO.: 011-22502267 EMAIL: goyalm@hurl.net.in

The invoice shall contain the following information:

- i. Work Order No.
- ii. Item no., quantity and complete description
- iii. Item-wise net price (unit and total) of the works where applicable.
- iv. Net amount payable by deducting advance payment already invoiced, if any, and the guarantee retention amount, if any, from the total value of the Works being invoiced.

The signed invoices, original and copy shall be made on Contractor's letter head and shall be duly signed.

Invoices for progress payment(s) shall state the information under (i), (ii) and (iii). Invoices for guarantee retention money shall state the information under (i) to (iv).

4.2. PROGRESS PAYMENT

1)	Invoice for	in	original	and	two	(2)	copies	duly	certified	by
	Owner / Consultant.									

2) Performance certificate in one (1) original plus two (2) copies from the beneficiary to the effect that progress achieved is equal to progress invoiced, duly certified by Owner/Consultant.



PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY DEPOSIT (EMD) / BID SECURITY

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	Bank Guarantee No Date
Го: 'Owner's Name and Address]	
Dear Sirs,	
n accordance with Invitation for Bids under your Bid Doo M/sts Registered/Head Office at called the 'Bidder') wish to participate in the said bid for	having here-in-after [Name
As an irrevocable bank guarantee againstvalid for rom(*)(**)(**)	daysrequired to be submitted by the Bidder which amount is liable to be forfeited on the
Ne, the Bank]	having our Headguarantee and undertake to ame of the Owner] (hereinafter called the the amount of hout any reservation, protest, demand and
This Guarantee shall be irrevocable and shall remain valurther extension of this guarantee is required, the same shexceeding one year) on receiving instructions from M/s whose behalf this guarantee is issued. In witness where of the set its hand and stamp on this	hall be extended to such required period (not
	(Signature)
	(Name)
	(Designation with Bank Stamp) Attorney as per Power of Attorney No

(To be stamped in accordance with Stamp Act, if any, of the Country of the issuing Bank)



PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY DEPOSIT (EMD) / BID SECURITY

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NOTE:

- 1. (*) The amount shall be as specified in Letter Inviting Bid.
 - (**) This shall be the date of opening of Technical and Commercial bids.
 - (#) Complete mailing address of the Head Office of the Bank to be given.
 - (@) This date shall be three (3) months beyond bid valid.
- 2. The Stamp Paper of appropriate value shall be purchased in the name of Bidder / Bank issuing the guarantee.



PROFORMA OF SECURITY CUM PERFORMANCE **BANK GUARANTEE / SECURITY DEPOSIT**

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(To be stamped in accordance with Stamp Act.)

if any, of the Country of the Issuing Bank)	•
in early, or and document or and recently	Bank Guarantee No Date
To, [Owner 's Name & Address]	
Dear Sirs,	
In consideration of the[Owner 's Name] (hereinafter referred expression shall unless repugnant to the context or meaning there administrators and assigns) having awarded to M/s[Contractor's Name/Head Office at	eof, include its successors, ne] with its Registered actor', which expression shall administrators, executors and dated and the same Contract bearing No or having agreed to provide a entire Contract equivalent to

referred to as the 'Bank', which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Owner, on demand any and all monies payable by the Contractor to the extent of aforesaid at any time upto(@).....(*)..... as [days/month/year] without any demur, reservation, contest, recourse or protest and/or without any reference to the Contractor. Any such demand made by the Owner on the Bank shall be conclusive and binding notwithstanding any difference between the Owner and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Owner and further agrees that the quarantee herein contained shall be enforceable till ninety (90) days after expiry of its validity.

The Owner shall have the fullest liberty, without affecting in any way the liability of the Bank under this guarantee, from time to time to extend the time for performance of the Contract by the Contractor. The Owner shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Owner and the Contractor or any other course or remedy or security available to the Owner. The Bank shall not be released of its obligations under these presents by any exercise by the Owner of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Owner or any other indulgence shown by the Owner or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving the Bank.

The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Owner may have in relation to the Contractor's liabilities.



PROFORMA OF SECURITY	Y CUM PERFORMANCE
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BANK GUARANTEE / S	SECURITY DEPOSIT

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Page 2 of 2

Notwithstanding anything contained hereinabove our liability under	
(@) and shall be extended from time to time	
one year), as may be desired by M/s[Contractor's Name]has been given.	on whose behalf this guarantee
Dated this day of 20 at	
WITNESS:	(Circostons)
(Signature)	(Signature)
(Name)	(Name)
(Official Address)	(Designation with
	Bank Stamp)
	Attorney as per Power of Attorney No

Notes:

- 1. (*) (@) This shall be as per the ITB document.
- 2. The stamp papers of appropriate value shall be purchased in the name of guarantee issuing Bank.



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ANK GUARANTEE FOR ADVANCE/	
PROGRESS PAYMENT	

5003/E/102/S-A/A-1.13	0	
DOC. NO.	REV.	HURL
Page 1 of 2		

Date

Bank Guarantee No.....

(To be stamped in accordance with Stamp Act if any, of the Country of the issuing Bank)

To,	
[Owner's Name & Address]	
Dear Sir,	
In consideration of[Owner's Name] (hereinafter referred to as the 'Owner', expression shall, unless repugnant to the context or meaning thereof include its successadministrators and assigns) having awarded to M/s[Contractor's Name] with Registered/Head Office at (hereinafter referred to as the 'Contractor' expression shall unless repugnant to the context or meaning thereof, include its successadministrators, executors and assigns), a Contract, by issue of Owner's Letter of Award dated	ssors, h its which ssors, l No.
resulting into a Contract bearing No dated dated	ed at
(hereinafter called the 'Contract') and the Owner having agreed to make an an in bearing advance ('said Advance') to the Contractor amounting to (in words figures) in terms of the said Contract for performance of the above Contract against Bank Guar to be furnished by the Contractor.	terest
We[Name and address of the Bank]	inless and or, all along owner upto ond/or all be antee oefore antee antee

The Owner shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee, from time to time to vary the advance or to extend the time for performance of the Contract by the Contractor. The Owner shall have the fullest liberty without affecting this guarantee, to postpone From time to time the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Owner and the Contractor or any other course or remedy or security available to the Owner. The Bank shall not be released of its obligations under these presents by any exercise by the Owner of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Owner or any other indulgence shown by the Owner or by any other matter or thing whatsoever which under law would but for this provision, have the effect of relieving the Bank.



BANK GUARANTEE FOR ADVANCE/ PROGRESS PAYMENT	Page 2 of 2	
ORKS (PACKAGE-I) AT BARAUNI, BIHAR	DOC. NO.	REV.

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HURL

The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Owner may have in relation to the Contractor's liabilities.

Notwithstanding anything contained hereinabove our li of advance amount] along with interest on the aforesaid and it shall remain in force up to and inclushall be extended from time to time for such period M/s	ne Advance amount released by the Owner as uding and (not exceeding one year), as may be desired by
Dated this day of 201	at
WITNESS:	(Signature)
(Signature)	(Signature)
(Name)	(Name)
(Official Address)	(Designation with Bank Stamp)
	Attorney as per Power of Attorney No

Notes:

- 1. (*)This shall be as per the ITB document.
- 2. The stamp papers of appropriate value shall be purchased in the name of guarantee issuing Bank.



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HURL

PROFORMA FOR BLACK-LISTED

(Self Declaration on Bidder's Letter Head as per below performa)

DECLARATION

To,
NIT NO.: PNPM/5003/E/102
SUBJECT: TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR.
Sir,
We hereby declare that M/s is neither put on Holiday or Black-listed by any Government / PSU / Private firm or Financial Institution.
Signature
Name : Designation :
Seal of the Bidder.



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FORMAT OF CONTRACT AGREEMENT

FORMAT OF CONTRACT AGREEMENT

(To be executed on non-judicial stamp paper of appropriate value)

THIS	CONTR	ACT AGREEMENT is made the	day of	, 20
busine	ame of ess at pration in	Owner], a corporation incorporated under t [address of Owner] (hereinafter called "facorporated under the laws of India and have reinafter called "the Contractor")	the Owner"), and (2)	[name of Contractor], a
	actor ha	ne Owner desires to engage the Contracto ave agreed to such engagement upon and		
NOW	IT IS H	EREBY AGREED as follows:		
		ARTICLE 1. CONTRAC	T DOCUMENTS	
1.1		ollowing documents shall constitute the Coach shall be read and construed as an integrated		
	a) b) c) d) e) f) g) h)	This Contract Agreement and the Appendication of Award Amendment to the NIT document. Instruction to Bidders Special Conditions of Contract General Conditions of Contract General / Technical Specifications and Dr The Bid and Schedule of Prices including submitted by the Contractor Integrity Pact (IP) signed between the Ow	awings g Supplementary Price	

1.2 Order of Precedence

In the event of any ambiguity or conflict between the Contract Documents listed above, the order of precedence shall be the order in which the Contract Documents are listed in Article 1.1 (Contract Documents) above.

1.3 **Definitions**

Capitalized words and phrases used herein shall have the same meanings as are ascribed to them in the General Conditions of Contract.



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FORMAT OF CONTRACT AGREEMENT

ARTICLE 2. CONTRACT PRICE AND PAYMENT TERMS

2.1 **Contract Price**

The Owner hereby agrees to pay to the Contractor the Contract Price in consideration of the performance by the Contractor of its obligations hereunder. The Contract Price shall be the *and [amount in words]*, *[amount in figures]*, or such other sums as may be determined in accordance with the terms and conditions of the Contract.

2.2 **Payment Terms**

Payment shall be made by the Owner to the Contractor as per the provisions of Bidding Documents.

ARTICLE 3. EFFECTIVE DATE FOR DETERMINING TIME FOR COMPLETION

The Completion period of the Project shall be determined from the date of Letter of Award.

ARTICLE 4. NON-ASSIGNABILITY

The Contract and benefits and obligations thereof shall be strictly personal to the CONTRACTOR and shall not on any account be assignable or transferable by the CONTRACTOR.

ARTICLE 5. GOVERNMENT OF INDIA NOT LIABLE

It is expressly understood and agreed by and between the Contractor and the Owner that the Owner 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 the Owner 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 the general principles of Contract Law. The Contractor expressly agrees, acknowledges and understands that the Owner is not an Agent, Representative or Delegate of the Govt. 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, the Contractor expressly waives, releases and foregoes any and all actions or claims, inlcuding cross claims, impleader claims or counter claims against the Government of India arising out of this Contract and covenants not to sue the Government of India as to any manner, claim, cause of action or thing whatsoever arising of or under this Contract.

ARTICLE 6. APPENDICES

The Appendices listed in the attached list of Appendices shall be deemed to form an integral part of this Contract Agreement. Reference in the Contract to any Appendix shall mean the Appendices attached hereto, and the Contract shall be read and construed accordingly.

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FORMAT OF CONTRACT AGREEMENT

ARTICLE 7. NO LIABILITY ON DIRECTOR AND EMPLOYEE

No Director, employee, consultant or agent of the OWNER or other person representing the OWNER or acting on behalf of the OWNER in or pursuant to the Contract or in the discharge of any obligation to the OWNER under the Contract or otherwise in relation to the Contract shall have any personal liability to the CONTRACTOR or any Sub-Contractor, agent, representative, director or employee of the CONTRACTOR or to any other person acting for or on behalf of the CONTRACTOR and the CONTRACTOR on its own behalf and on behalf of its Sub Contractors, directors, employees, agents and representatives hereby waives and disclaims any and all right of action which it or they may have whether under tort or Contract or otherwise against the OWNER or any director, employee, agent, consultant or representative of the OWNER for act of omission or commission done or omitted to be done.

ARTICLE 8. WAIVER

No failure or delay by the OWNER in enforcing any right or remedy of the OWNER in terms of the CONTRACT or any obligation or liability of the CONTRACTOR in terms thereof, shall be deemed to be a waiver of such right, remedy, obligation or liability, as the case may be, by the OWNER and notwithstanding such failure or delay, the OWNER shall be entitled at any time to enforce such right, remedy, obligation or liability, as the case may be.

ARTICLE 9. LANGUAGE OF CONTRACT AND COMMUNICATION

The language of the Contract shall be English and all communications, drawings, design, data, information, codes specifications and other document whatsoever supporting the bid or otherwise exchanged under the Contract shall be in English. In the event that any technical documentation is in any language other than English, the document should be translated and presented to the OWNER/Project Manager in English and English document/translated document shall be regarded as the only authentic document.

IN WITNESS WHEREOF the Owner and the Contractor have caused this Agreement to be duly executed by their duly authorized representatives the day and year first above written.

3 ,		
[Signature]		
[Title]		
in the presence of _		
Signed by for and o	n behalf of the Contractor	
[Signature]		
[Title]		
in the presence of _ CONTRACT AGRE		
CONTRACT AGRE		
dated the BETWEEN	day of	, 20

Signed by for and on behalf of the Owner



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FORMAT OF CONTRACT AGREEMENT

["the Owner"] and		
["the Contractor"]	 	



SUBJECT:

Designation

Date

TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR.

DECLARATION BY BIDDER REGARDING BIDDING DOCUMENT

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WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR.	
We (Name of the Bidder) hereby represent that we have gone through an	d
understood the Bidding Documents, NIT NO: PNPM/5003/E/102 DATED (including but no	ot
limited to) the Commercial & Technical Requirements/ Specifications in Section-A: Commercial and	d
Section-B: Technical of the Bidding documents and amendments, if any, and that our Bid has bee	n
prepared accordingly in compliance with the requirements stipulated in the said documents.	
We are submitting a copy of complete set of Bidding Documents, Section-A: Commercial and	d
Section-B: Technical and Amendments, if any, as part of our Bid duly signed and stamped on each	h
page in token of our acceptance. Further we undertake that in the event of award of work to us, all th	е
parts shall be considered for constitution of Contract Agreement.	
For and on behalf of :	
Stamp & Signature :	
Name :	

TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY



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FORMAT FOR INTEGRITY PACT

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INTEGRITY PACT BETWEEN HINDUSTAN URVARAK & RASAYAN LTD. (HEREINAFTER REFERRED TO AS "THE OWNER") AND (HEREINAFTER REFERRED TO AS "THE BIDDER/CONTRACTOR")

PREAMBLE

The Owner invites the bids from all eligible bidders and intends to enter into contracts for Project / Work _______, with the successful bidder(s), as per organizational systems and procedures. The Owner values full compliance with all relevant laws and regulations, and the principles of economical use of resources, and of fairness and transparency in its relations with its Bidder(s) and/or Contractor(s).

In order to achieve these goals, the Owner will appoint an Independent External Monitor (IEM), who will monitor the bidding process and the execution of the contract for compliance with the principles mentioned above.

Section 1: Commitments of the Owner

- 1. The Owner Commits itself to take all measures necessary to prevent corruption and to observe the following principles in this regard:
 - a) No employee of the Owner, either in person or through family members including relatives, will in connection with the bidding for or the execution of a contract, demand or accept a promise for or accept for him/herself or for a third person, any material or immaterial benefit to which he/she is not legally entitled to.
 - b) The Owner shall, during the bidding process treat all Bidders with equity and reason. The Owner will, in particular, before and during the bidding process, provide to all Bidders the same information and will not provide to any Bidder confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the bidding process the contract execution.
 - c) The Owner will exclude from the process all known prejudiced persons.
- 2. If the Owner obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act or if there be a substantive suspicion in this regard, the Owner will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.



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Section 2: Commitments and Undertakings by the Bidder/Contractor

- 1. The Bidder/Contractor commits and undertakes to take all measures necessary to prevent malpractices & corruption. He commits himself to observe the following principles during his participation in the bidding process and during the execution of the contract:
 - a) The Bidder/ Contractor undertakes not to, directly or through any other person or firm offer, promise or give or influence to any employee of the Owner associated with the bidding process or the execution of the contract or to any third person on their behalf any material or immaterial benefit which he/she is not legally entitled, in order to obtain in exchange any advantage of any kind whatsoever during the bidding process or during the execution of the contract.
 - b) The Bidder/ Contractor undertake not to enter into any undisclosed agreement or understanding, whether formal or informal with other Bidders. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other action to restrict competitiveness or to introduce cartelization in the bidding process.
 - c) The Bidder/Contractor undertakes not to commit any offence under the relevant Anticorruption Laws of India; further the Bidder/Contractor will not use improperly, any information or document provided by the Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically for purposes of competition or personal gain and will not pass the information so acquired on to others.
 - d) The Bidder/ Contractor will, when presenting his bid undertakes, to disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2. 2 The Bidder/ Contractor will not instigate and allure third persons/parties to commit offences outlined above or be an accessory to such offences.

Section 3: Disqualification from Bidding Process and Exclusion from Future Contracts

- If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of any provisions of Section 2 or in any other form so as to put his reliability or credibility as Bidder into question, the Owner shall be entitled to disqualify the Bidder(s)/ Contractor(s) from the bidding process or to terminate the contract, if signed on that ground.
- 2. If the Bidder/ Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Owner shall be entitled to exclude including blacklist and put on holiday the Bidder/ Contractor for any future tenders/contract award process. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the Owner taking into consideration the full facts and circumstances of each case particularly taking into account the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a minimum of 3 years.



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FORMAT FOR INTEGRITY PACT

- 3. A transgression is considered to have occurred if the Owner after due consideration of the available evidence concludes that no reasonable doubt is possible
- 4. The Bidder with its free consent and without any influence agrees and undertakes to respect and uphold the Owner's absolute rights to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.
- 5. Subject to full satisfaction of the Owner, the exclusion of Bidder/ Contractor could be revoked by the Owner if the Bidder/ Contractor can prove that he has restored/ recouped the damage caused by him and has installed a suitable corruption prevention system in his organization.

Section 4: Compensation for Damages including Forfeiture of Earnest Money Deposit /Security Deposit / Performance & Advance Bank Guarantees

- If the Owner has disqualified the Bidder/ Contractor from the bidding process or has terminated the contract pursuant to Section 3, the Owner shall forfeit the Earnest Money Deposit/Bid Security, encash Contract Performance Bank Guarantees in addition to excluding the bidder from the future award process and terminating the contract.
- 2. In addition to 1 above, the Owner shall be entitled to take recourse to the relevant provisions of the contract related to Termination of Contract due to Contractor's Default.

Section 5: Previous Transgressions

- The Bidder swears on oath that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country conforming to TI approach or including with any Public Sector Enterprise/ Undertaking in India or any Government Department in India that could justify bidder's exclusion from the tender process.
- 2. If the Bidder makes incorrect statement on this subject, Bidder can be disqualified from the bidding process or the contract, if already awarded, can be terminated on this ground.

Section 6: Company Code of Conduct

Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.

Section 7: Independent External Monitors

1. The Owner will appoint competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

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FORMAT FOR INTEGRITY PACT

- 2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He shall report to CHAIRMAN, HURL or a person authorized by him.
- 3. The Bidder/Contractor accepts that the Monitor has the right to access without restriction to all Project documentations of the Owner including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his Project Documentations. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder / Contractor / Sub-Contractors/ JV partners/Consortium member with confidentiality.
- 4. The Owner will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Owner and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Owner (CHAIRMAN, HURL or a person authorized by him) and request to discontinue or to take corrective action, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action. However, Independent External Monitor shall give an opportunity to the bidder/contractor to present its case before making its recommendations to the Owner
- 6. The Monitor will submit a written report to CHAIRMAN, HURL or a person authorized by him within 8-10 weeks from the date of reference or intimation to him by the Owner and, should the occasion arise, submit proposals for correcting problematic situations.
- 7. The Monitor shall be entitled to compensation on the same terms as being extended to/provided to Independent Directors of HURL Board.
- 8. If the Monitor has reported to CHAIRMAN, HURL or a person authorized by him a substantiated suspicion of an offence under relevant IPC/ PC Act, and he has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 9. The word "Monitor" will include Singular or Plural.

Section 8: Pact Duration

 This Pact comes into force from the date of signing by all the parties. It shall expire for the Contractor 12 months after the last payment under the respective contract, and for all other unsuccessful bidders 6 months after the contract has been awarded.



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FORMAT FOR INTEGRITY PACT

Section-9: Miscellaneous Provisions

- 1. This Pact is subject to Indian Law. The place of performance and jurisdiction shall be New Delhi.
- 2. Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 3. The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

The Parties hereby sign this Integrity Pact aton this	day of20)
Owner		Bidder/ Contractor
		Witness
		1
		2
Date :	(Signature)	
Place:	(Printed Nam	ne)
	(Designation))
	(Common Se	eal)



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PROFORMA FOR SOLVENCY CERTIFICATE

PROFORMA FOR SOLVENCY CERTIFICATE

(on Bank's Letter Head)
REF NO:
To Whomsoever Concerned
This is to certify that to the best of our knowledge and information, M/s
This certificate is issued without any guarantee, risk or responsibility on behalf of the Bank or any of its officials.
This certificate is issued at the specific request of the customer.
Yours faithfully,
(Bank Official's signature & stamp)



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FORMAT FOR EFT DETAILS

FORMAT FOR EFT DETAILS

I/ WE hereby agree to receive the payment against our bills raised to M/s Hindustan Urvarak & Rasayan Ltd. directly in our bank account as per details given below through Electronic Fund Transfer Mechanism. Necessary details are given as below:

1	Name, Branch and address of Payee's bank	:	
2	Title of the account	:	
3	Account number	:	
4	Nature of the Account	:	
5	Branch MICR code number	:	
	[Enclose photocopy of cancelled cheque]	:	
6	Permanent Account Number	:	
	[PAN] of the Payee	:	
7	IFSC Code	:	
ST	AMP & SIGNATURE OF BIDDER :		
NA			
DA			



GENERAL GUIDELINES FOR GST

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GENERAL GUIDELINES FOR GOODS & SERVICE TAX (GST)

1.0 SCHEDULE OF RATES / BID PRICES

- 1.1. 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).
- 1.2. 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.
- 1.3. 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.
- 1.4. 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 and SOR.
- 1.5. 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 it's applicability with respect to the contract.
- 1.6. Further, Bidder shall also mention the **Service Accounting Codes (SAC)** at the designated place in SOR.

2.0 GST (CGST & SGST/UTGST or IGST)

2.1 Bidders are required to submit copy of the GST Registration Certificate while submitting the bids wherever **GST (CGST & SGST/UTGST or IGST)** is applicable.



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GENERAL GUIDELINES FOR GST						
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Quoted prices should be inclusive of all taxes and duties, except GST (CGST & SGST or 2.2 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, HURL may seek copies of challan and certificate from Chartered Accountant for deposit of GST (CGST & SGST/UTGST or IGST) collected from Owner.

- 2.3 In case CBEC (Central Board of Excise and Customs)/ any equivalent government agency brings to the notice of HURL that the Supplier of Goods / Services (Service Provider) has not remitted the amount towards GST (CGST & SGST/UTGST or IGST) collected from HURL to the government exchequer, then, that Supplier of Goods / Services (Service Provider) shall be put under Holiday list of HURL for period of six months.
- 2.4 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.
- 2.5 Beyond the contract period, in case HURL 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.
- 2.6 Beyond the contract period, in case HURL 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 HURL account.
- 2.7 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.

2.8 Owner/HURL 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/HURL to claim input tax credit of GST



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(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.

- 2.09 Owner/HURL will reimburse GST (CGST & SGST/UTGST or IGST) to the Supplier of Goods / Services (Service Provider) at actual 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.
- 2.10 The bids will be evaluated based on total price including applicable GST (CGST & SGST/UTGST or IGST).
- 2.11 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 HURL 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.
- 2.12 In case HURL 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 HURL has the obligation to discharge GST (CGST & SGST/UTGST or IGST) liability under reverse charge mechanism and HURL 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 HURL or ITC with respect to such payments is not available to HURL for any reason which is not attributable to HURL, then HURL shall be entitled to deduct/ setoff / recover such amounts against any amounts paid or payable by HURL to Contractor / Supplier.

2.13 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 HURL 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 HURL for any reason which is not attributable to HURL, then HURL 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



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IGST) thereupon together with all penalties and interest if any, against any amounts paid or payable by HURL to Supplier of Goods / Services.

3.0 **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.

[A confirmation to above will also be submitted by contractor in Annexure-1.2 of Section-A (Commercial)]

3.1 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 HURL/PDIL. Further, in case rating of bidder is negative / black listed after award of work for supply of goods / services, then HURL 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 HURL.

SECTION-B TECHNICAL



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PROJECT - BARAUNI FERTILIZER PLANT

TENDER DOCUMENT

OF

LAND DEVELOPMENT, DEMOLITION WORKS & BOUNDARY WALL REPAIR

(PACKAGE - I)

FOR

M/S HURL, BARAUNI

0	04.08.17	Issued for Tender	AK	SS	UPT
Р	27.07.17	Issued for Review	AK	SS	UPT
REV	DATE	PURPOSE	PREPARED	REVIEWED	APPROVED



TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS

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PART - I



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PROJECT: - BARAUNI FERTILIZER COMPLEX

GENERAL SPECIFICATIONS & SCOPE OF

LAND DEVELOPMENT, DEMOLITION WORKS & BOUNDARY WALL REPAIR

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1. 00.0 **GENERAL**

- 1.01.1 This section of the tender Documents deals mainly with the Scope and Technical Specifications needed for the execution and construction of complete Land Development, Demolition Works & Boundary wall repair on Percentage (%) basis. The work shall have to be carried out both below and above ground level as per the items indicated in the "Schedule of Rates".
- **1.01.2** In the event of conflict between the requirements of two or more clauses of the specifications/ Documents, the more stringent requirement as per the interpretation of the Owner/ Consultant shall prevail.
- 1.01.3 The Contractor shall inspect and examine the site and its surrounding and shall satisfy himself before submitting his bid as to the nature of the ground and subsoil, the form and nature of the site, the quantum and the nature of work and material necessary for successful completion of the works and the means of access to site and in general shall himself obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his Tender. Under no circumstances, extra payment consequent on any misunderstandings or otherwise on the part of the Contractor shall be allowed.
 - 1.01.4 The Contractor shall have to take all safety precaution to protect all the existing equipment, structures, facilities and buildings etc. from damage. In case, any damage occurs due to the activities of the Contractor on account of negligence, ignorance, accidental or any other reasons whatsoever, the damage shall be made good by the Contractor at his own cost to the satisfaction of the Owner / Consultant. The Contractor shall have to take also all necessary safety measure, at his own cost, to avoid any harm/ injury to his workers and staff and facilities of the existing plant.

1.02.00 SCOPE OF WORK

- **1.02.01** The Scope of Work consists of the construction/ execution of land development, demolition/ dismantling and Boundary wall repair for M/s HURL Fertilizer Complex proposed within/ outside the battery limits of plant.
- 1.02.02 The work to be performed under the Scope of Work consists of providing all labor, materials except if indicated in Schedule Of Rates, supervision, scaffolding, construction equipment, tools, tackles and plants, supplies, transportation, all incidental items though not indicated or specified, but reasonably implied or necessary for successful completion of the work including Contractor's supervision strictly in accordance with the "Good for Construction" Drawings to be supplied progressively by the Owner/ Consultant, "Technical Specifications" and "Schedule of Rates" of this Tender on Item Rate basis. Sampling & testing of material & equipment shall be done as per relevant clauses of BIS & shall not be paid extra. The contractor shall preferably establish a laboratory at site for all relevant site test as per BIS requirements. The nature of work shall generally involve earth work in grading and leveling of the site area by excavation and filling with available/ imported selected good



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earth under desired compaction, dewatering, shoring, strutting, etc disposal of excavated surplus earth/ materials, breaking, concreting including reinforcements and formwork, fabrication and construction of reinforced cement concrete columns, slabs, beams. The work also includes dismantling and/or demolishing of existing PCC/RCC, flooring, plastering, brick masonry, any sort of roofing with water proof treatment works including stacking separately service- able and disposal of unserviceable materials & rebuilding as per requirements.

- **1.02.0.3** The scope of work also includes preparation of Bar Bending Schedule for the reinforcements including getting them Approved from the Owner/ Consultant.
- **1.02.0.4** All statuary approvals is in the scope of the contractor, like Mining dept, Environmental clearance, Railways authority etc.
- 1.02.1.0 The complete work associated with the project of Fertilizer Complex consists of mainly but not Limited to the followings:-
- 1.02.1.1 Land Development & Demolition Works

The scope of work under this includes construction/ execution, providing necessary engineering supervision through qualified and technical personnel, skilled and unskilled labour, etc. and mobilization of all relevant and adequate plants, tools and tackles, equipment, machineries, etc., to carry out all activity for successful completion of the proposed project of Fertilizer Complex. The scope of work shall also include dismantling and/or demolishing of existing plain cement concrete and reinforced cement concrete, brick masonry work below and above ground level, structural steel, floors, plastering and any sort of roofing works including stacking separately serviceable materials and disposal of unserviceable materials. The above work shall have to be carried out both below and above ground level. The scope of work also covers the Repair of Boundary wall including dismantling of plaster and brickwork, new brickwork, replastering, painting & concertina coil fencing etc. All the civil & structural works shall be carried out strictly in accordance with the "Technical Specifications, Preamble to schedule of rates and Schedule of Rates" enclosed with this document. The complete works associated with the project of Fertilizer Complex consists of mainly but not limited to the followings.

- 1) Land Development
- 2) Demolition above & below ground of Existing Structures (RCC & Steel).
- 3) Repair of Boundary wall

1.02.1.2 MATERIAL OF CONSTRUCTIONS

 CONCRETE:-M25/M30 or otherwise as specified with OPC shall be used.



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- ii. CEMENT: OPC 43 grade cement shall be used in all works for foundations, Sub-structure & Super-structure.
- iii. FOR REINFORCEMENT STEEL Fe 500D Grade of following make:
 - a) STEEL AUTHORITY OF INDIA LTD.
 - b) TATA IRON & STEEL CO. LTD.
 - c) RASTRIYA ISPAT NIGAM LIMITED (Vishakhapatnam).

PART - II



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FOR DISMANTLING AND DEMOLISHING WORKS

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1.0 SCOPE

This specification covers the technical and precautionary requirements for the dismantling & demolition of foundation, RCC / steel structure, brick works etc.

These technical Specifications shall be supplementary to the specifications contained in the CPWD specifications, wherever at variance, these Particular Specifications shall take precedence over the provisions in the CPWD Specifications.

All the measurements shall be as per IS 1200 (relevant part with latest revision) and precautions should be taken as per guidelines mentioned in IS 4130 (latest)

2.0 TERMINOLOGY

- (i) Dismantling: The term 'Dismantling' implies carefully separating the parts without damage and removing. This may consist of dismantling one or more parts of the building as specified or shown on the drawings.
- (ii) Demolition: The term 'Demolition' implies breaking up. This shall consist of demolishing whole or part of work including all relevant items as specified or shown on the drawings.

3.0 PRECAUTIONS

- (i) The demolition shall always be well planned before hand and shall generally be done in reverse order of the one in which the structure was constructed. The operations shall be got approved from the Engineer-in-Charge before starting the work.
- (ii) Due care shall be taken to maintain the safety measures prescribed in IS 4130.
- (iii) Necessary propping, shoring and or under pinning shall be provided to ensure the safety of the adjoining work or property before dismantling and demolishing is taken up and the work shall be carried out in such a way that no damage is caused to the adjoining work or property. Wherever specified, temporary enclosures or partitions and necessary scaffolding with suitable double scaffolding and proper cloth covering shall also be provided, as directed by the Engineer-in-Charge.
- (iv) Necessary precautions shall be taken to keep noise and dust nuisance to the minimum. All work needs to be done under the direction of Engineer-in-Charge. Helmets, goggle, safety belts etc. should be used whenever required and as directed by the Engineer-in-Charge.
 - The demolition work shall be proceeded with in such a way that it causes the least damage and nuisance to the adjoining building and the public.
- (v) Dismantling shall be done in a systematic manner. All materials which are likely to be damaged by dropping from a height or by demolishing roofs, masonry etc. shall be carefully removed first. Chisels and cuters may be used carefully as directed. The dismantled articles shall be removed manually or otherwise, lowered to the ground (and not thrown) and then properly stacked as directed by the Engineer-in-Charge.







- (vi) Where existing fixing is done by nails, screws, bolts, rivets, etc., dismantling shall be done by taking out the fixing with proper tools and not by tearing or ripping off.
- (vii) Any serviceable material, obtained during dismantling or demolition, shall be separated out and stacked properly within a lead of 50 metres or as directed by the Engineer-in-Charge. All unserviceable materials, rubbish etc. shall be disposed off as directed by the Engineer-in-Charge.
- (viii) The contractor shall maintain/disconnect existing services, whether temporary or permanent, where required by the Engineer-in-Charge.
- (ix) No demolition work should be carried out at night especially when the building or structure to be demolished is in an inhabited area.
- (x) Screens shall be placed where necessary to prevent injuries due to falling pieces.
- (xi) Water may be used to reduce dust while tearing down plaster from brick work.
- (xii) Safety belts shall be used by laborers while working at higher level to prevent falling from the structure.
- (xiii) First-aid equipment shall be got available at all demolition works of any magnitude.

4.0 RECOMMENDATIONS FOR DEMOLITION OF CERTAIN SPECIAL TYPES AND ELEMENTS OF STRUCTURES

- (i) Roof Trusses If a building has a pitched roof, the roof structure should be removed to wall plate level by hand method. Sufficient purlins and bracing should be retained to ensure stability of the remaining roof trusses while each individual truss is removed progressively.
- (ii) Temporary bracing should be added, where necessary, to maintain stability. The end frame opposite to the end where dismantling is commenced, or a convenient intermediate frame should be independently and securely guyed in both directions before work starts.
- (iii) On no account should the bottom tie of roof trusses be cut until the principal rafters are prevented from making outward movement.
- (iv) Heavy Floor Beams

Heavy bulks of timber and steel beams should be supported before cutting at the extremities and should then be lowered to a safe working place.

(v) Brick Work

- 1 Expert advice should be obtained and at all stages of the demolition, the closest supervision should be given by persons fully experienced and conversant in the type of work to ensure that the structure is stable at all times.
- 2 As much dead load as possible may be removed provided it does not interfere with the stability of the main structure.

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3 Where it is impossible to allow debris to fall to the ground below, centering designed to carry the load should be erected and the arch demolished progressively. The design of the centering should make appropriate allowance for impact.

- 4 Collapse of the structure can be effected in one action by the use of explosives. Charges should be inserted into boreholes drilled in brick work. This method is the most effective for demolition of tall viaducts.
- Where explosives are used it is preferable to ensure the collapse of the whole structure in one operation to obviate the chance of leaving unstable portions standing. Cantilevers (Not part of a Framed Structure) A cantilever type of construction depends for its stability on the super imposed structure. Canopies, cornices, staircases and balconies should be demolished or supported before the tailing down load is removed.
- (vi) Cantilevers (Not part of a Framed Structure)

A cantilever type of construction depends for its stability on the super imposed structure. Canopies, cornices, staircases and balconies should be demolished or supported before the tailing down load is removed.

(vii) In-situ Reinforced Concrete

- 1 Before commencing demolition, the nature and condition of the concrete, the condition and position of reinforcement, and the possibility of lack of continuity of reinforcement should be ascertained.
- Attention should be paid to the principles of the structural design to determine which parts of the structure depend on each other to maintain overall stability.
- Demolition should be commenced by removing partitions and external non-load bearing cladding. It should be noted that in some buildings the frame may rely on the panel walls for stability.
- (viii) Where hard demolition methods are to be used, the following procedures should be used.
 - (a) Reinforced Concrete Beams

For beams, a supporting rope should be attached to the beam. Then the concrete should be removed from both ends by pneumatic drill and the reinforcement exposed. The reinforcement should then be cut in such a way as to allow the beam to be lowered under control to the floor.

(b) Reinforced Concrete Columns

For columns, the reinforcement should be exposed at the base after restraining wire guy ropes have been placed round the member at the top. The reinforcement should then be cut in such a way as to allow the column to be pulled down to the floor under control.



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(c) Reinforced Concrete Walls

Reinforced concrete walls should be cut into strips and demolished as for columns.

5.0 **MEASUREMENTS**

- (i) All work shall be measured net in the decimal system, as fixed in its place, subject to the following limits, unless otherwise stated hereinafter.
 - (a) Dimensions shall be measured correct to a cm.
 - (b) Areas shall be worked out in sqm correct to two places of decimal.
 - (c) Cubical contents shall be worked out to the nearest 0.01 cum.
- (ii) Parts of work required to be dismantled and those required to be demolished shall be measured separately.
- (iii) Measurements of all work except hidden work shall be taken before demolition or dismantling and no allowance for increase in bulk shall be allowed.
- (iv) Specifications for deduction for voids, openings etc. shall be on the same basis as that adopted for new construction of the work.
- (v) Work executed in the following conditions shall be measured separately.
 - (a) Work in or under water and/or liquid mud
 - (b) Work in or under foul position.

(vi) Roofs

- a. Roof coverings generally including battens boarding, mats, bamboo jaffari or other subsidiary supports shall be measured in square metres except lead sheet roof covering which shall be measured in quintals (15.2.3) and stone slab roof covering which shall be measured in cubic metres.
- b) Ridges, hips and valleys shall be girthed and included with the roof area. Corrugated or semi corrugated surfaces shall be measured flat and not girthed.
- c) Mud phuska on roofs shall be measured in cubic metres.
- d) Lead sheets in roofs shall be measured in quintals and hips, valleys, flashings, lining to gutter etc. shall be included in this weight.
- e. R.B. or R.C.C. roofs shall be measured as specified in 15.3.11.
- f. Supporting members, such as rafters, purlins, beams joists, trusses etc. of wood shall be measured in cubic metres and steel or iron sections, in quintals.



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(vii) Ceiling

- a) The stripping of ceilings shall be measured in square metres.
- b) Dismantling of supporting joists, beams, etc. shall be measured in cubic metres or in quintals.
- c) Height above floor level, if it exceeds 3.5 m shall be paid for separately.

(viii) Flooring and Pavings

- a. Dismantling of floors (except concrete and brick floors) shall be measured in square metres.
- b. Supports such as joints, beams etc. if any shall be measured in quintal.
- Concrete and Brick Roofs and Suspended Floors
- d. Demolition of floors and roofs of concrete or brick shall be measured in cubic metres. Beams cantilevers or other subsidiary supports of similar materials, shall be included in the item. In measuring thickness of roofs provide with water proofing treatments with bitumen felts, the thickness of water proofing treatment shall be ignored.

(ix) Walls and Piers

- a) Taking down walls and independent piers or columns of brick, stone or concrete shall be measured, in cubic metres. All copings, corbels, cornices and other projections shall be included with the wall measurements.
- b) In measuring thickness of plastered walls, the thickness of plaster shall be ignored.
- c) Ashlar face stones, dressed stone work, pre-cast concrete articles, etc. if required to be taken down intact shall be so stated and measured separately in cubic metres.
- d) Cleaning bricks stacking for measurements including all extra handling and removal and disposing off the rubbish as stated shall be enumerated in thousand of cleaned bricks.
- e) Cleaning stone obtained from demolished/dismantling stone masonry of any description including ashlar facing dressed stone work, stone slabs or flagging and pre-cast concrete blocks including all extra handling and disposing off the rubbish as stated shall be measured in cubic metres of cleaned stone.
- Honey comb works or cavity walls of bricks stone or concrete shall be measured as solid.

(x) Reinforced Concrete and Brick Work

a. Reinforced concrete structures and reinforced brick roofs and walls shall be measured in cubic metres and if reinforcement is required to be salvaged, it shall be so stated.



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- b. Where reinforcement is required to be separated, scraped and cleaned, the work shall be measured separately in quintal of salvaged steel.
- c. Partitions, Trellis Work etc.
- d. Partitions or light walls, of lath and plaster, trellis work, expanded metal, thin concrete or terracotta slabs and other similar materials including frame work if any shall be measured in square metres stating the overall thickness.

(xi) Wood Work

All wood work including karries average 40 sq cm or over in section, shall be measured in cubic metres, while that under 40 sq cm in section, in running metres.

Ballies shall be measured in running metres.

Boarding including wooden chajjas and sun shades along with supports shall be measured in square metres in its plane.

Steel and Iron Work

- a. All steel and iron work shall be measured in quintals. The weight shall be computed from standard tables unless the actual weight can readily be determined.
- b. Riveted work, where rivets are required to be cut, shall be measured separately.
- c. Marking of structural steel required to be re-erected shall be measured separately.
- d. In framed steel items, the weight or any covering material or filling such as iron sheets and expanded metal shall be included in the weight of the main article unless such covering is not ordered to be taken out separately.

(xii) Doors and Windows

Dismantling of doors, windows, clerestory windows, ventilators etc. (wood or metal) whether done separately or along with removal of wall by making recess in the wall shall be enumerated. Those exceeding 3 sqm each in area shall be measured separately. The item shall include removal of chowkhats architraves, holdfasts and other attachments. If only shutters are to be taken out it shall be measured separately.

(xiii) Pipes and Sewer Lines

- a) Water pipe lines including rain water pipes with clamps and specials, sewer lines (salt glazed ware or concrete) etc. shall be described by their diameter and length measured in running metres inclusive of joints.
- b) If the joints, special and fittings etc. are required to be separated, it shall be so stated and enumerated.



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- c) Pucca drains shall be measured under relevant items.
- d) Valve cistern, public fountain platform, fire hydrants, etc. shall be enumerated.
- e) Manholes and inspection chambers shall be enumerated stating the size and depth of manhole/inspection chamber. They shall be classified into different groups depending upon the depth, in unit of half and one metre depth. The depth of the manhole shall be the distance between the top of manhole cover and invert level of the drain.
- f) Ventilating shafts, gully traps, flushing cisterns and other appurtenant items of work shall be enumerated.

(xiv) Posts or Struts

Posts or struts (wood, steel or RCC) section including taking out embedded portion shall be measured in running metres.

(xv) Fencing Wire Mesh

Wire mesh fencing of any type with frame shall be measured in square metres.

(xvi) Glazing

Taking out any portion of serviceable glass except polished plate, from old sashes, skylights, etc. (any thickness, weight or size) raking out old putty, etc. shall be measured in square metres. Irregular circular panes shall be measured as rectangle or square enveloping the same. The width and height being measured correct to the nearest 0.5 cm.

(xvii) Road Work

- a. Different types of road surfaces shall be measured separately.
- b. Road surfaces metalling or soling (base) shall be measured in square metres.
- c. Concrete paving shall be measured as in 15.3.8 or 15.3.9 as the case may

6.0 **RATES**

The rate shall include the cost of all labour involved and tools used in demolishing and dismantling including scaffolding. The rate shall also include the charges for separating out and stacking the serviceable material properly and disposing off unserviceable material beyond distance of 50 metres up to plant battery limit or any other area as specified by Municipal Corporation with consultation of the Owner. The rate shall also include for temporary shoring for the safety of portions not required to be pulled down, or of adjoining property, and providing temporary enclosures or partitions, where considered necessary.



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Abbreviations:

cms CENTIMETERES

DGMS DIRECTOR GENERAL OF MINES SAFETY

gm/cc GRAM PER CUBIC CENTIMETRE

M METRE

M² SQUARE METRE

mm MILIMETRE

sqm SQUARE METRE

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1.0 SCOPE

This specification and the method of measurements described thereon are applicable for earthwork involved in Site Grading & Rock Cutting.

2.0 CODES & STANDARDS

IS:2720 Part-IV Methods of tests for soils.

IS:2720 Part-V Methods of tests for soils- Part 5, Determination of liquid &

plastic limit.

IS:2720 Part-VII Methods of tests for soils-Part 6, Determination of shrinkage

factors.

6-65-0016 Std. Specification for classification of soil for earthwork in the

grading.

NOTE:- Latest Edition of all Codes and Standards shall be followed.

3.0 GENERAL

- 3.1 CONTRACTOR shall maintain adequate drainage facilities at SITE at all times during the execution of work. Additional ditches, drains & such other temporary means to achieve this, over and above what is shown in the drawings, shall be provided and maintained by CONTRACTOR at his own cost.
- 3.2 Adequate dewatering facilities like dewatering pumps and piping etc. shall also be provided by the CONTRACTOR for this work, including dewatering during excavation etc. as required, at his own cost.

4.0 MATERIAL FOR EARTHWORK

- 4.1 Only soil considered suitable by the Engineer-in-charge shall be deployed for the construction and that considered unsuitable shall be disposed off, as directed by Engineer-in-charge, at his own cost and no claim for compensation will be entertained.
- 4.2 The CONTRACTOR shall give the samples of soil he proposes to use for filling, along with the following characteristics of the samples, to Engineer-in-charge for approval, prior to collection and use. The tests for these characteristics shall be done in a laboratory / test house as approved by Engineer-in-charge.
 - i. Mechanical analysis or grain size analysis as per IS: 2720 Part-IV.
 - ii. Liquid limit as per IS: 2720 Part-V.
 - iii. Plastic limit as per IS: 2720 Part-V.
 - iv. Moisture density relationship as per IS: 2720 Part-VII.

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- 4.3 The soil used for filling shall be free from boulders, lumps, tree roots, rubbish or any organic deleterious matter.
- 4.4 Soil having plasticity index less than 20 shall be used, for filling purpose.
- 4.5 Soil having laboratory maximum dry density of less than 1.5 gms/cc shall not be used.
- 4.6 Care shall be taken to see that unsuitable waste material is disposed off in such a manner that there is no likelihood of its getting mixed with the material, proposed to be used, for filling.
- 4.7 The work shall be so planned and executed that the best available soil are reserved. for the top portion of Embankments.

5.0 CUTTING TREES

- All trees having girth above 30 cms, which are not marked for preservation, shall be cut down and their roots dug up to a depth of 1 metre from the existing ground level.
- 5.2 All holes or hollows produced by digging up roots shall be carefully filled with approved soil, including all leads and lifts, rammed and compacted to obtain 95% of maximum laboratory dry density of soil and levelled as directed.
- 5.3 All uprooted trees shall be stacked or disposed off as directed by Engineer-in-charge.

5.4 **Payment**

Cutting of trees above 30 cms girth shall be paid per number. The rate quoted shall include cutting, uprooting removing the trees within plant boundary as directed, including filling holes or hollows produced by removal of roots etc. as per specifications.

6.0 CLEARING AND STRIPPING

- All the areas, including depressions, where filling or cutting is to be carried out shall be cleared and stripped completely of bushes, roots, vegetation, plantation trees, shrubs, trees. up to 30 cms girth, organic and other objectionable materials. All these shall be completely uprooted and virgin soil exposed and not merely scrapped at the surface. The roots of trees of girth up to 30 cms shall be removed to a minimum depth of 1M below existing ground level and holes, hollows filled up with selected approved available soil within all leads and lifts and compacted to obtain 95% of laboratory dry density of soil as per IS: 2720, Part VII and levelled as directed by Engineer-incharge. All soft patches must be worked out to remove soft soil and selected approved earth must be filled back and the areas (areas coming under filling) compacted to obtain 95% of maximum laboratory dry density of soil, as per IS: 2720 Part VII. The depth of stripping shall be generally 50 to 150 mm as decided by Engineer-in-Charge.
- 6.2 Material obtained from clearing shall be stacked or disposed off as directed by



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Engineer-in-charge within a lead as per directions of Engineer-in-Charge.

6.3 **Payment**

No separate payment shall be made for clearing, stripping and disposal of materials obtained from clearing. This shall be considered as part of cutting work in areas of cutting and filling work in areas of filling and the rates quoted under the respective items of

- Earthwork in Excavation/ Cutting
- ii. Earthwork in filling (both with available earth & earth obtained from approved borrow areas); shall be inclusive of clearing and stripping with all operations described above in clause no.6 in respective areas of cutting and filling.

No separate payment shall be made for clearing, stripping and disposal of materials obtained from clearing of borrow areas for earth. This shall be considered as part of filling work in area of filling and the rate quoted under the respective items.

7.0 EARTHWORK IN EXCAVATION/CUTTING

- 7.1 After clearing and stripping of areas as specified above in clause No.6, spot levels at intervals and pattern as decided by the Engineer-in-charge, shall be taken jointly by CONTRACTOR and Engineer-in-charge. Excavation / cutting shall commence only after the levels are signed by the contractor as a token of his acceptance.
- 7.2 Excavation / cutting shall be carried out strictly as per the instruction of Engineer-in-charge.
- 7.3 If the contractor excavates / cuts beyond the required level, additional quantity of earthwork shall not be paid for. The excavation taken below the specified level shall be made good by filling with approved material, to the required compaction, at Contractor's cost.
- 7.4 The final bed and sides of excavation, must be levelled, dressed and compacted. In case of areas under excavation for site grading, the final surface shall be levelled, dressed and consolidated by means of sheep foot power driven rollers to obtain maximum compaction. However, no test control is required in such areas.
- 7.5 Shoring and strutting shall be adopted only with the permission of Engineer-in-charge in writing. Such shoring and strutting shall follow the necessary specification.
- 7.6 Provisions for dewatering shall be governed by the relevant clauses.

7.7 Payment

Payment for Excavation shall be on the basis of volume of excavation calculated on the basis of joint level taken as per clause 7.1 and the final finished grade levels, the volume being calculated by the Trapezoidal rule including dewatering, if required.



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Intermediate payment will be on the basis of volume calculated based on spot levels taken during the time of the billing. Reference is also invited to clause 7.3.

8.0 EARTHWORK IN FILLING

8.1 After clearing, stripping and consolidation of areas as specified in clause 6, spot levels at intervals and pattern as decided by Engineer-in-charge shall be taken jointly by the CONTRACTOR and Engineer-in-Charge and filling shall commence only after the levels are signed by the CONTRACTOR as a token of his acceptance. Approved fill Material shall be spread in uniform layers not exceeding 30 cms in loose depth.

The contractor has to make his own approach and access roads from the borrow area to the demarcated filling areas. While the CONTRACTOR may .make use of such short cuts as may be available to him for earth movement from borrow areas to the filling areas, the OWNER does not guarantee any passage way or right of way for the CONTRACTOR's work other than available at site. No claim shall also be admissible to the CONTRACTOR on account of his having to take longer leads or routes for earth movement, than envisaged by him, either due to any road cuttings, non-availability of routes, or any other grounds whatsoever.

In case total filling required in any area consists of soil both from borrow areas and available approved excavated material from within plant area, then joint levels, shall be taken before commencing filling with earth from borrow area.

However, earth available from borrow areas required for filling can be used only after the available earth from excavation within demarcated area has been utilised and clearance to this effect obtained from the Engineer-in-charge.

- 8.2 All clods, lumps etc, shall be broken before compaction.
- 8.3 Successive layers of filling shall not be placed until the layer below has been thoroughly compacted and tested to satisfy the requirements laid down in this specification.
- 8.4 Prior to Earth filling work, the Soil sample taken from available excavated earth or an outside source shall be sent to laboratory for establishing Optimum moisture content and Maximum dry density of the soil type.
- 8.5 Prior to rolling, the moisture content of material shall be brought to within plus or minus 2% of the Optimum Moisture Content as described in IS: 2720 Part VII. The moisture content shall preferably be on the wet side for potentially expansive soil.
- 8.6 After adjusting the Moisture Content as described in clause 8.5, the layers shall be thoroughly compacted by either sheep foot roller or power driven roller or vibratory roller, as approved by Engineer-in-charge, so as to obtain compaction of 95% of maximum laboratory dry density is obtained. All such tests including the In-situ tests carried out on site shall be in Contractor's scope and nothing extra shall be payable on this account.



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- 8.7 Each layer shall be tested in field for density and accepted by Engineer-in-charge, subject to achieving the required density, before laying the next layer. A minimum of one test per 500m2 for each layer shall be conducted.
- 8.8 If the layer fails to meet the required density, it shall be reworked or the material shall be replaced and method of construction altered as directed by Engineer-in-charge to obtain the required density.
- The filling shall be finished in conformity with the alignment, levels, cross-section and dimensions as shown in the drawing.

Earthen embankment shall be filled 300mm more on both sides, where height is more than 1M and this extra filling shall be dressed, after compaction, in conformity with alignment, level, cross-section and dimension as shown in the drawing, to achieve proper compaction in the slope. No extra payment shall be made in this regard.

8.10 Extra material shall be removed and disposed off as directed by the Engineer-in-charge.

8.11 Tolerances

General site grading, including cutting and filling in depressions, shall be carried out to within up down tolerance of ±5 cms of final lines, grades and slopes.

8.12 Earth Work in Filling in Open Lined / Unlined Wells

For earth work in filling in open lined/unlined wells, only locally available coarse sand shall be used, in layers of 500 mm thickness. Each layer shall be thoroughly wetted by sprinkling water, before next layer is filled up. Filling shall be done up to 1m depth below NGL as above. Layers from a depth of 1m below NGL, up to NGL, shall also comprise of locally available coarse sand and compacted with suitable Mechanical manual means, to obtain same level of compaction as required for filling above NGL. Filling above NGL shall be done as per Cl. 8.1 to 8.10 above.

8.13 **Payment**

- 8.13.1 Payment for filling shall be made on cubic metre of volume calculated on the basis of cross section plotted from the levels of ground, where filling is to be carried out and the levels reached after filling is duly consolidated, volume being calculated by Trapezoidal method.
- 8.13.2 In case of simultaneous cut and fill operation, wherever specified, payment shall be made on the basis of one composite rate for cutting and filling. All other details about measurement etc. remaining same as above.
- 8.13.3 Payment for filling in open wells, lined or unlined, shall be made on the basis of volume calculated on the basis of average area mult6iplied with depth of open well.
- 8.13.4 No extra payment shall be made towards testing.

9.0 REMOVAL OF SURPLUS EARTH



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9.1 Surplus earth and soil from excavation and general site grading shall be removed from the construction areas to the area demarcated by the Engineer-in-charge.

9.2 **Payment**

Payment shall be made only for lead beyond initial lead from construction area. Rate shall include loading, transportation, dumping, stacking the surplus earth and soil in the area demarcated by the Engineer-in-charge.

Payment shall be made on cubic metre basis of the difference of measurements of the volumes of the excavation and the measurement of the filling with the excavated earth. However, the contractor's entitlement to payment shall be restricted to the actual quantity of earth removed. Quantity generated due to void in back filled volume of earth shall also be removed by the contractor at no extra cost and this disposal of earth shall not be measured and paid under any item.

10.0 **EXCAVATION IN ROCK**

- Blasting operations shall be carried out with the prior permission and in the presence of the Engineer-in-charge or his authorised representative and during fixed time hours of the day. Blasting operations shall be carried out as per Indian Explosive Rules 1983, amended up to date. The contractor shall obtain license from Controller of explosives to carry out blasting operations as well as for obtaining and storing the explosives as per Indian Explosive Rules (latest). All safety precautions such as providing safety nylon netting etc. shall be carried out as per instructions of the Engineer-in-charge.
- 10.1.1 The contractor shall ensure that all workmen and the personnel at site except those who have actually to light the fuse are evacuated from the unsafe area to be determined by the Engineer and warned by loud speaker in local language to safe distance, not less than 200 metres at least 15 minutes before firing time by sounding warning siren. The area shall be encircled by red flags. The contractor shall be responsible for any accident to workmen, public or property due to blasting operation.
- 10.1.2 Gunpowder, gelatine and other safe explosives only shall be used wherever possible. Explosives with nitro-glycerine shall be used only under exceptional circumstances, with prior approval of the Engineer-in-Charge.
- 10.1.3 All fuses shall be cut to the length required, before being inserted into the holes.
- 10.1.4 The no. of charges to be fired and the actual no. of shots heard shall be compared and the person responsible must satisfy himself by examination that all the charges have exploded before work people are permitted to approach the scene. The withdrawal of a charge, which has not exploded shall under no circumstances be permitted, such charges shall be flooded with water and the hole marked into a distinguishing manner. The next hole to be fired shall be at a distance of about 500 mm from the unexploded hole and fired in the usual way.

The contractor or any .of his competent authorised person shall be in charge of the blasting operations and shall be held responsible for strictly observing the safety



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rules, .particularly applicable to blasting operations, in addition to other safety rules.

10.1.5 For blasting rocks with dynamite, the following general principles shall be observed.

In general, the following diameter of drills shall be used for different depth of borehole's.

From 1-2 metres 25mm diameter

From 2-3.25 metres 37-50mm diameter

From 3.25-4.75metres 50-65mm diameter

The boreholes should generally be not more than 1.5m'deep and the distance apart should be from one and a half to twice their depth.

Cracks and fissures in the rock to be blasted shall be carefully studied to ascertain the best position for the boreholes. The charge shall always be placed in a sound piece of rock, if possible not nearer than 300mm from the crack.

10.2 Rules for Blasting with Dynamite and other High Explosives

- 10.2.1 The Person-in-charge must show that he is thoroughly acquainted with the blasting operations and that he understands the rules laid down herewith. He will be held responsible for any accident that may occur. He must be a licenced blaster with a valid licence from DGMS.
- 10.2.2 Boreholes must be of such a size and uniform that the cartridges can easily pass down them.
- 10.2.3 The position of all holes to be drilled must be marked out with white paint and the person in-charge must take particular note of these positions.
- 10.2.4 The drilling operation after being finished, the person-in-charge must make a second inspection and satisfy himself that the boreholes marked out by him have been drilled and cleaned properly.
- 10.2.5 The person-in-charge must prepare all charges necessary for boreholes.
- 10.2.6 Number of holes to be loaded and fired at one time shall be as per explosive rules. Boreholes must be thoroughly cleared before a cartridge is inserted.

The loading is to be done by the person-in-charge himself and the position of the charge holes' carefully noted by him. Circular wooden 'tamping rods only to be used in charging holes with flat bottom, (one cartridge at a time must be inserted) and cartridge gently pressed with the tamping rod.

10.2.7 Immediately before firing a blast, due warning must be given and the person-incharge must see that all the labours have retired to safety.



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The safety fuses of the charged holes are to be lighted in the presence of the personin-charge, who must see that the fuses of the holes charged have properly ignited.

After the blast, the person-in-charge must carefully inspect the work and satisfy himself that all the charges have exploded.

10.3 Misfires

- 10.3.1 Misfires are a source of great danger. If it is suspected that part of the blast to fire is delayed, sufficient time shall be allowed to elapse before entering the danger zone. When fuse and blasting caps are used, a safe time of at least an hour should be allowed.
- 10.3.2 None of the drillers are to work near these holes until the three following operations have been done by the person-in-charge.
 - a. The Person-in-charge .should very carefully extract the tamping with a wooden scrapper and withdraw the fuse with the primer and detonator attached, after which a fresh primer and detonator with fuse should be placed in this hole and fired; or
 - b. The hole may be cleared of 300mm of tamping and the direction then ascertained by placing a stick in the hole. Another hole may then be drilled 150mm away and parallel to it: this hole to be then charged and fired when the other charge should explode.
 - c. Drilling in holes not completely exploded by blasting shall not be permitted.

10.4 Precautions Against Misfire

- 10.4.1 The safety fuse should be cut in an oblique direction with a knife.
- 10.4.2 All saw dust must be cleared from the inside of the detonator; this can be done by blowing down the detonation and tapping the. open end. No instrument shall be inserted into the detonator for this purpose.
- 10.4.3 After inserting the fuse in the detonator, it shall be fixed by means of nippers.
- 10.4.4 If there is water present, or if the boreholes be damp, the junction of the fuse and detonator must be made water tight by means of grease, white lead or tar.
- 10.4.5 The detonator should be inserted into the cartridge, so that about one third of the copper tube is left exposed outside the explosives. The safety fuse outside the detonator, should be necessarily tied in position in the cartridge. Waterproof fuse only to be used in the damp boreholes, or when water is present in the borehole.
- 10.4.6 If a misfire has been found to be due to defective fuse, detonator or dynamite, the whole quantity or box from which the detective article was used shall be rejected.



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10.4.7 Storage of materials for blasting shall be as per statutory regulations / stipulations of the concerned authorities.

It shall be the Contractor's responsibility to arrange for proper storage of explosives and obtain required permissions from concerned authorities. No separate payment shall be payable for the above.

10.4.8. Cleaning of Excavation

Excavation shall be cleaned, ttimmed to exact shape and all disturbed material 'and other debris shall be removed. When the excavation have been taken out to the lines specified as shown on the drawings and the surface cleaned as specified, the contractor shall notify the Engineer that the excavation is ready for inspection and no further work shall be done with concrete or backfill until it has been inspected and approved by the Engineer. Cost of this work is deemed to have been included in the unit rates for excavation.

10.4.9. Use of Excavation Material

Where any material obtained from the excavation is, in the opinion of the Engineer, suitable for use in a particular section of the work as fill or backfill, such material shall be selected and if necessary, loaded, hauled, placed, spread and used to construct the fill or backfill with respect to the lines and grades specified for the work. As far as possible the most suitable of the materials excavated for the work shall be used to construct the fill and backfill embankments, roads and storage areas, where required. The useful rock available shall be stacked at the locations as decided by the Engineer and the cost of this work is deemed to have been included in the Unit rate of excavation.

Materials containing brush roots or other perishable materials shall not be considered suitable. The suitability of the materials and their disposition in the work shall be subject to the approval of the Engineer-in-Charge.

10.4.10 **Disposal of Surplus material**

All surplus materials shall be carried away from the site and disposed at dumping sites selected by the Engineer, up to a lead as indicated in the relevant items of the schedule of rates. All serviceable materials shall be stacked at a location in the plant boundary as directed by the Engineer-in-charge and the Non-serviceable materials shall be disposed outside plant boundary at a location after permission from Municipal corporation or local authority. The Engineer may ask the contractor to dump the excavated materials in regular heaps, bunds, blankets', riprap with regular slopes as directed by the Engineer and levelled so as to provide natural drainage. As a rule, all softer material shall be laid along the centre of heaps, with the harder and more weather resisting materials forming the casing on the sides and the top. Excavated rocks, which can be used in soling as road metals or for making concrete aggregate shall be stacked separately, as directed by the Engineer. All such works as mentioned above is deemed to have been taken into account while, quoting for the excavation and the contractor for the above works shall claim no extras. All rock excavated from the pits shall be the property of the Owner.



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10.4.11 Stock Piles

When the removal of material from excavation progresses at a faster rate or at different times than placement in backfill is being accomplished, such excavated materials shall be stock piled at approved locations adjacent to the work until their use is authorised.

10.4.12 Spoil Areas

Material excavated for the works, which is rejected as unsuitable or not required by the Engineer, shall be disposed of in spoil areas as specified-by the Engineer.

The spoil areas shall be left in a neat and sight condition and sloped to drain properly as may be directed by the Engineer.

10.5 **Control Blasting**

10.5.1 **General**

This specification lays down .the requirements for control blasting for rock excavations wherever required.

Wherever required by the Engineer, the rock blasting shall be controlled, so that vibration generated during the blasting do not cause damage to the buildings and installation around built up areas. Similarly the rock pieces should not fly off the pits and thus damage the buildings and installation around. Apart from the general precautions mentioned in the preceding paragraphs, following protective measures are suggested as guidelines. Tenderers are requested to carefully check the site conditions and submit the details of the scheme they propose to adopt for controlling the blast.

10.5.2 **Protective Measures**

- a. Short delay blasting with light charges shall be used.
- b.The blast hole shall be covered with 0.6 to 1.0 sqm. Mild steel plate of minimum 6mm thickness.
- c. Reinforcement rod mesh, not less than 20mm dia at 150mm centres in both directions, shall be put over the steel plates.
- d.Steel plate and reinforcements shall be inspected after every blasting operation and all twists shall be removed before reuse, to the satisfaction of the Engineer-in-Charge.
- e.The thickness of the covering plate and the kind of dead weight shall be duly got approved from the Engineer-in-Charge.

When blasting is necessary adjacent to partially or completely built structures, the



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contractor shall take all precautions necessary to prevent flying rock from causing damage to the structures.

In no case shall blasting be allowed closer than 15m to any structure after concrete placing has started.

The contractor shall be responsible for all damage caused by blasting, whether permanent or temporary structure and shall replace or repair the structures at his own cost.

10.6 Classification of soil

If soil of any classifications other than that specified in the Schedule of Rates is met during excavation, the decision of the Engineer-in-charge as to the classification of soil, levels of the strata of different classifications and their locations shall be binding.

In above case, the total quantity of Excavation shall be computed from the measurement of the area excavated. The hard rock and soft rock shall be measured' separately from the relevant stacks and each shall be reduced by fifty percent for voids, and paid under the relevant items. The balance, that is the total quantity of excavation minus the reduced (for voids) quantity of excavation for rocks shall be paid as soil as per the discretion of the Engineer-in-Charge. However, the maximum payment shall be limited to the volume of the area excavated, as approved by Engineer-in-charge.



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1.0 **GENERAL**

- 1.1 Specifications of materials and workmanship shall be as described in the Central Public Works Department Specifications Vol. I to VI (latest) including latest amendments, unless otherwise specified. These CPWD Specifications shall be deemed to form part of this contract. The **CONTRACTOR** shall procure and maintain copies of the latest CPWD Specifications at site for reference.
- 1.2 These technical Specifications shall be supplementary to the specifications contained in the CPWD specifications, wherever at variance, these Particular Specifications shall take precedence over the provisions in the CPWD Specifications.
- 1.3 Site clearing - Site clearing means the cutting of trees, bushes, shrubs etc. and the pulling out of roots and stumps to effect a general cleaning of the site area. All these materials shall be removed from the site area at the CONTRACTOR's expenses and responsibility and shall be disposed off as directed by Engineer-in-Charge. Trees, bushes, roots, stumps and other materials shall not be disposed off by burning within the site boundaries unless the **Engineer-in-Charge** permits.

2.0 **REFERENCE CODES & STANDARDS**

- 2.1 Wherever reference of BIS Specifications/ or BIS Codes of Practice are made in the Specifications/ Schedule of Rates or Preambles, reference shall be to the latest edition of BIS (Bureau of Indian Standards).
 - BIS 109 Ready mixed paint, brushing, priming, plaster to Indian Standard colour No. 631 & 361 white and off-white.
 - BIS 383 Coarse & Fine aggregates from natural sources for concrete.
 - BIS 432 Mild Steel & Medium tensile steel bars.
 - BIS 456 Code of Practice for Plain and Reinforced Concrete.
 - BIS 515 Natural and Manufactured aggregates for use in mass concrete

3.0 PLAIN AND REINFORCED CONCRETE WORK

This specifications deals with cement concrete, plain or reinforced, for general use, and covers the requirements for concrete materials, their storage, grading, mix design, strength & quality requirements, pouring at all levels, reinforcements, protection, curing, form work, finishing, painting, admixtures, inserts and other miscellaneous works.

3.1 **MATERIALS**

Cement: Any of the following cements may be used as required. 3.1.1



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BIS - 269	Ordinary Portland cement, 33 grade
BIS - 8041	Rapid hardening Portland cement
BIS - 455	Portland slag cement
BIS - 8112	43 Grade ordinary Portland cement
BIS - 12330	Sulphate resistant ordinary Portland cement
BIS - 6909	Specifications for super Sulphate cement

- 3.1.2 <u>Water</u>: Water used for mixing and curing concrete and mortar shall conform to the requirements as laid down in BIS: 456. Sea water shall not be used for concrete work.
- 3.1.3 <u>Aggregates</u>: Coarse and fine aggregates for cement concrete plain and reinforced shall conform to the requirements of BIS 383 and / or BIS 515. Before using, the aggregates shall be tested as per BIS: 2386.

<u>Coarse aggregate</u>: Coarse aggregate for all cement concrete work shall be broken or crushed hard stone, black trap stone obtained from approved Quarries or gravel.

<u>Sand</u>: Fine aggregate for concrete work shall be coarse sand from approved sources. Grading of coarse sand shall be within grading zones I, II or III laid down in BIS: 383, table 4. If required the aggregates (both fine and coarse) shall have to be thoroughly washed and graded as per direction of **Engineer-in-Charge**.

3.2 **MIXING**

All cement concrete plain or reinforced shall be machine mixed. Mixing by hand may be employed where quantity of concrete involved is small, with the specific prior permission of the **Engineer-in-Charge**. 10% extra cement shall be added in case of hand mixing as stipulated in BIS-456.

For large and medium project sites the concrete shall be sourced from ready-mixed concrete plants or from on site or off site batching and mixing plants (BIS 4926)

3.3 WATER CEMENT RATIO

Once a mix, including its water-cement ratio, has been determined and specified for use by the **Engineer-in-Charge**, that water cement ratio shall be maintained.

3.4 LAYING

Concreting shall be commenced only after the **Engineer-in-Charge** has inspected and passed the sub-base / base or the centering, shuttering and reinforcement. Concrete in slab beams, columns, footings etc. shall be laid gently in layers not



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exceeding 15 cm and shall be properly consolidated by means of approved mechanical vibrators.

3.5 **CURING**

- a. After the concrete has begun to harden, it shall be protected with moist gunny bags, sand or any other material approved by the **Engineer-in-Charge** against quick drying. After 24 hours of laying concrete, the surface shall be cured by flooding with water or by covering with wet absorbent materials for 7 days as per the direction of **Engineer-in-Charge**.
- b. Approved curing compounds may be used in lieu of moist curing with the permission of the **Engineer-in-Charge**. Such compounds shall be applied to all exposed surfaces of the concrete as soon as possible after the concrete has set. No extra payment shall be made for the same.

3.6 GRADES OF CONCRETE

3.6.1 Grades of cement concrete shall be as given below:

	Grade Specified	Characteristic compressive strength at 28 days (N/mm²)
i.	M 7.5	7.5 (75 Kg/cm ²)
ii.	M 10	10 (100 Kg/cm ²)
iii.	M 15	15 (150 Kg/cm ²)
iv.	M 20	20 (200 Kg/cm ²)
V.	M 25	25 (250 Kg/cm ²)
vi.	M 30	30 (300 Kg/cm ²)

- 3.6.2 Grades lower than M 20 shall not be used in reinforced concrete.
- 3.6.3 M 7.5 grades of concrete may be used for lean concrete bases & M 10 for simple foundation of masonry walls.
- 3.6.4 A sieve analysis test of aggregates shall be carried out as and when the source of supply is changed without extra charge not withstanding the mandatory test required to be carried out as per CPWD specification.
- 3.6.5 All test in support of mix design shall be maintained as a part of records of the contract. Test cubes for mix design shall be prepared by the CONTRACTOR under



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his own arrangements and at his costs, but under the supervision of the **Engineer-in-Charge**.

3.8 **DESIGN MIX CONCRETE**

- 3.8.1 Design mix shall be allowed for major works where it is contemplated to be used by installing weigh batch mixing plant as per BIS 4925. At the time of tendering, the **CONTRACTOR**, after taking into account the type of aggregates, plant and method of laying he intends to use, shall allow in his tender for the design mix i.e., aggregate/cement and water/cement ratios which he considers will achieve the strength requirements specified, and workability for concrete to be properly finished.
- 3.8.2 Before commencement of concreting, **CONTRACTOR** shall carry out preliminary tests for design mix on trial mixes proposed by him in design of mix to satisfy the **Engineer-in-Charge** that the characteristic strength is obtained. In this regard, CONTRACTOR may consult govt. approved/reputed institute to get design mix done as per BIS 10262 at his own cost. The concrete mix to be actually used shall be approved by the **Engineer-in-Charge**.
- 3.8.3 Notwithstanding the above, the following shall be the maximum combined weight of coarse and fine aggregate per 50 kg of cement.

	Grade of Concrete	Maximum weight of fine & coarse aggregates together per 50 kg of cement (for nominal mix only)
i.	M - 10	480 kg
ii.	M - 15	350 kg
iii.	M - 20	250 kg

- 3.8.4 The workability of concrete produced shall be adequate, so that the concrete can be properly placed and compacted. The slump shall be as per BIS 456.
- 3.8.5 The minimum consumption of the cement irrespective of design mix shall not be less than the following:

M 7.5 (1:4:8)	170 kg/cu m
M 10 (1:3:6)	220 kg/cu m
M 15	300 kg/cu m

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M 20	350 kg/cu m
M 25	400 kg/cu m

3.9 **TESTING OF CONCRETE**

- 3.9.1 Testing of concrete, sampling and acceptance criteria shall be in accordance with BIS 456.
- 3.9.2 A slump test shall be taken at each mixer at least once in every fifty batches mixed. Any batch for which a slump test is being made shall not be transferred to the place of laying until the slump test has been completed. Any batch which gives a slump in excess of that described at the time of preliminary tests shall be rejected and removed from the site.
- 3.9.3 At least six cubes shall be taken for every 30 cu. metres of concrete or part thereof deposited in the work on any day. Three cubes shall be tested for 28 days strength.
- 3.9.4 If a test for particular work does not meet the specified requirements, the **Engineer-in-Charge**, in his absolute discretion may accept the work at a correspondingly reduced rate provided the average strength at 28 days is not less than 85% of the specified strength.
- 3.9.5 If the results are poorer than 85% of the specified strength, the **Engineer-in-Charge** may order further testing of any kind as may be deemed necessary in his opinion, including load tests. The load tests shall be carried on the portion of the structure involving concrete represented by the unsatisfactory works test and such other adjoining elements of a building as the **Engineer-in-Charge** may decide. If the results of the load tests are not satisfactory, the CONTRACTOR shall at his own cost undertake remedial measures including dismantling and reconstruction according to the directions and to the satisfaction of the **Engineer-in-Charge**. If the load test is successful, the **Engineer-in-Charge** may exercise his judgment before accepting or rejecting the work and shall still have the power to apply a reduction in rate as herein-stated before, in case the work in question is accepted.

3.10 **PROPORTIONING**

Mixes of cement concrete shall be as ordered. Where the concrete is specified by grade, it shall be prepared by mixing cement, sand and coarse aggregate by weight as per mix design. In case the concrete is specified as volumetric mix, then dry volume batching shall be done, making proper allowances for dampness in aggregates and bulking in sand. Equivalent volume batching for concrete specified by grade may however be allowed by the **Engineer-in-Charge** at his discretion.



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3.11 PRE CAST CONCRETE

The specifications for pre cast concrete will be similar as for the cast in situ concrete. All pre cast work shall be carried out in a yard made for the purpose. This yard shall be dry, properly leveled and having a hard and even surface. If the ground is to be used as a soft former of the units, shall be paved with concrete or masonry and provided with a layer of plaster (1:2 proportion) with smooth neat cement finish or a layer of MS sheeting. The casting shall be over suitable vibrating tables or by using form vibrators as per directions of **Engineer-in-Charge**.

The yard, lifting equipment, curing tank, finished material storage space etc. shall be designed such that the units are not lifted from the mould before 7 (seven) days of curing and can be removed for erection after 28 (Twenty Eight) days of curing. The moulds shall preferably be of steel or of timber lined with G.I.sheet metal. The yard shall preferably be fenced.

Lifting hooks, wherever necessary or as directed by **Engineer-in-Charge** shall be embedded in correct position of the units to facilitate erection, even though they may not be shown on the drgs. and shall be burnt off and finished after erection.

Pre cast concrete units, when ready shall be transported to site by suitable means approved by **Engineer-in-Charge**. Care shall be taken to ensure that no damage occurs during transportation. All adjustments, leveling and plumbing shall be done as per the instructions of the **Engineer-in-Charge**. The CONTRACTOR shall render all help with instruments, materials and staff to the **Engineer-in-Charge** for checking the proper erection of the pre cast units.

After erection and alignment the joints shall be filled with grout or concrete as directed by **Engineer-in-Charge**. If shuttering has to be used for supporting the pre cast unit they shall not be removed until the joints has attained sufficient strength and in no case before 14 (fourteen) days. The joint between pre cast roof planks shall be pointed with 1:2 (1 cement: 2 sand) mortar where called for in the drgs.

3.12 PROTECTION OF CONCRETE

All concrete shall be protected from damage by rain or by workmen, equipment, overload or any other causes. All edges, corners and projections of concrete members likely to be damaged, shall be protected by means of wooden cover fillets.

3.13 CONSTRUCTION JOINTS



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Construction joints shall be made only where shown on the drawings or as approved by the **Engineer-in-Charge**. The procedure given in clause 13.4 of BIS: 456 shall be followed for general guidance.

3.14 **SEPARATION JOINT**

Separation Joint shall be obtained by using an approved alkathene sheet struck on the surface against which concrete shall be placed. Adequate care should be taken to cause no damage to the sheet.

3.15 DAMP PROOF COURSES

Damp proof course shall consist of cement concrete of specified proportions and thickness. Surface of brick or stone masonry shall be leveled and prepared before laying the cement concrete.

3.16 **SAMPLING OF CONCRETE**

Sampling & strength Test of concrete, Acceptance criteria and Inspection & Testing of Structure: This shall be as per the requirements laid down in clause Nos: 14, 15 & 16 of BIS: 456.

4.0 STEEL REINFORCEMENT

- 4.1 Steel reinforcement shall comprise
 - i. Mild steel bars conforming to BIS: 432 Part-I.
 - ii. Cold twisted bars conforming to BIS: 1786
 - iii. CRS bars
 - iv. TMT bars
 - v. Hard drawn steel wire fabric conforming to BIS: 1566
- 4.2 All joints in reinforcement shall be lapped adequately to develop the full strength of the reinforcement as per provision of BIS: 456 or as per instruction of **Engineer-in-Charge**.

As and when required, welded laps shall be provided as specified by **Engineer-in-Charge.** Following procedure shall be followed for welding of Tor steel reinforcement bars.

1. Welding of Tor steel reinforcement bars shall be taken up only after specific approval by **Engineer-in-Charge**.



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- 2. Lap welding with longitudinal beads shall only be adopted.
- 3. Welding shall be carried in accordance with BIS 2751 & 9417. Only qualified welders shall be permitted to carry out such welding.
- 4. For cold twisted reinforcement, welding operations shall be controlled to prevent a supply of large amount of heat, larger than can be disspated. The extreme nontwisted end portion shall be cut off before welding. Electrodes with rutile coating should be used.
- 5. Welding procedure shall be approved by **Engineer-in-Charge** and tests shall be made to prove the soundness of the welded connection
- 6. Stripper at closer spacing shall be provided in the lap welded joints as directed by **Engineer-in-Charge**.
- 4.3 M.S. round bars shall be hooked at ends as specified. Ribbed Tor-Steel shall be bent at right angles at ends as indicated or directed.

5.0 FORM WORK

- The shuttering or form work shall conform to the shape, lines and dimensions as shown on the drawings and be so constructed as to remain sufficiently rigid during placing and compacting of the concrete and shall be sufficiently tight to prevent loss of liquid from the concrete. The surface that becomes exposed on the removal of forms shall be examined by **Engineer-in-Charge** or his authorized representative before any defects are made good. Work that has sagged or bulged out, or contains honey combing, shall be rejected. All shuttering shall be plywood or steel shuttering.
- The **CONTRACTOR** shall be responsible for sufficiency and adequacy of all form work. Centering and form work shall be designed & detailed in accordance with BIS 14687 and approved by the **Engineer-in-Charge**, before placing of reinforcement and concreting.

5.3 **STRIPPING TIME**

Forms shall not be struck until the concrete has reached strength at least twice the stress to which the concrete may be subjected at the time of removal of form work. The strength referred to shall be that of concrete using the same cement and aggregates, with the same proportions and cured under conditions of temperature and moisture similar to those existing on the work. Where possible, the form work shall be left longer as it would assist the curing.

Note 1 - In normal circumstances and where ordinary Portland cement is used, forms may generally be removed after the expiry of the following periods:



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a.	Walls, columns and vertical faces of all
•	structural members

24 to 48 hours as may be decided by the **Engineer-in-**

Charge

b. Slabs (props left under)

3 days

c. Beam soffits (Props left under)

7 days

d. Removal of props under slabs

1. Spanning up to 4.5 m

7 days

2. Spanning over 4.5 m

14 days

Removal of props under beams and e.

arches :

1. Spanning up to 6 m

14 days

2. Spanning over 6m

21 days

For other types of cements, the stripling time recommended for ordinary Portland Cement may be suitably modified.

Note 2 - The number of props left under, their sizes and disposition shall be such as to be able to safely carry the full dead load of the slab, beam or arch as the case may be together with any live load likely to occur during curing or further construction.

6.0 BRICK WORK

This specification covers the construction of brick masonry in foundations, arches, walls, etc. at all elevations. The provision of BIS: 2212 shall be complied with unless permitted otherwise.

6.1 Bricks

All bricks shall conform to minimum class 7.5 as designated in CPWD Specifications unless specified otherwise.

6.2 Mortar

- 6.2.1 Cement and water shall conform to the requirements laid down for cement concrete work.
- 6.2.2 Sand for masonry mortar shall be coarse sand conforming to BIS: 2116. Maximum quantities of clay, fine dust shall not be more than 5% by weight. Organic impurities shall not exceed the limits laid down in BIS: 2116.
- 6.2.3 Mix of mortar for building brick work shall be as specified in the item of work.



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6.2.4 Mixing of mortar shall be done in a mechanical mixer. When quantity involved is small, hand mixing may be permitted by the **Engineer-in-Charge**. Any mortar remaining unused for more than 30 minutes after mixing shall be rejected.

6.3 Brick Masonry

Brick work shall be built in English bond, unless otherwise specified. The thickness of joints shall be 10 mm \pm 3 mm. Thickness of joints shall be kept uniform. In case of foundations and manholes etc. Joints up to 15 mm may be accepted.

6.4 Half Brick Masonry

All courses shall be laid with stretchers. Reinforcement comprising 2 Nos.6 mm dia MS bars shall be provided over the top of the first course and thereafter at every third course.

6.5 <u>Fixtures</u>

All iron fixtures, pipe spouts, hold fasts of doors and windows, which are required to be built into the wall shall be embedded in cement concrete blocks 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size indicated in the item.

6.6 Curing

Brick work shall be protected from rain by suitable covering when the mortar is green. Masonry work shall be kept constantly moist on all faces for a minimum period of seven days.

6.7 <u>Cement Concrete Block</u>

Cement concrete block shall be machined made in the proportion of such that mix shall not be leaner than one cement to Twelve combined aggregates (by volume) but having minimum strength of M 7.5. Combined aggregate shall be graded as near as possible to BIS: 383. The fineness modules of combined aggregate shall be between 3.6 and 4. The concrete block shall be properly cured as per BIS-456. The surface of conc. block shall have even face without any honeycomb and free from cracks.

6.7.1 Mortar

Cement and water shall confirm to the requirements laid down for cement concrete work.

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- 6.7.2 Sand for concrete block masonry mortar's shall be coarse sand generally conforming to BIS: 2116. Maximum quantities of clay, fine dust, shall not be more than 5% by weight. Organic impurities shall not exceed the limits laid down in BIS: 2116.
- 6.7.3 Mix of mortar for building concrete block shall be as specified in the item of work.
- 6.7.4 Mixing of the mortar shall be done in a mechanical mixer. When quantity involved is small hand mixing may be permitted by **Engineer-in-Charge**. Any mortar remaining unused for more than 30 minutes after mixing shall be rejected.

6.8 <u>Concrete Block Masonry</u>

The thickness of joints shall be 10 mm +- 3mm. Thickness of joints shall be kept uniform. In case of foundation and manholes etc. joints up to 15 mm may be accepted.

6.9 Half Concrete Block

All courses shall be laid with stretchers. Reinforcement comprising 2 nos. 6 mm dia MS bars shall be provided over the top of the first course and thereafter at every fourth course.

6.10 Fixtures

All iron fixtures, pipes spouts, hold fasts of doors and windows which are required to be built into the wall shall be embedded in cement concrete blocks 1:2:4 mix (1 cement :2 coarse sand :4 graded stone aggregate. 20 mm nominal size) of size indicated in the item.

6.11 Curing

Concrete block masonry shall be protected from rain by suitable covering when mortar is green. Masonry work shall be kept constantly moist on all faces for a minimum period of seven days.

6.12 <u>Tests and Records</u>

All tests, Field or Laboratory (Field and an approved outside Lab.) is in the Contractor's scope and all Test Records are to be maintained in line with the CTE format. For this purpose, the Contractor has to establish a Laboratory for Field tests, well equipped with all necessary tools and tackles e.g. Sieves of different sizes, Universal testing machine, slump cone and cube mould etc. For conducting such tests, nothing extra shall be payable.

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PART - III



PROJECTS & DEVELOPMENT INDIA LTD

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PREAMBLE TO SCHEDULE OF RATES FOR LAND DEVELOPMENT, DEMOLITION

WORKS & BOUNDARY WALL REPAIR

0	04.08.17	Issued for Tender	AK	SS	UPT
Р	27.07.17	Issued for Tender	AK	SS	UPT
REV	REV DATE	PURPOSE	PREPD	REVWD	APPD

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1.00 GENERAL

- The plans have been evolved tentatively based on information available with Owner / Consultant but the dimensions and details etc. are liable to changes. The Tenderers shall not be entitled to claim any higher rate or compensation on this account. The tender drawings are intended mainly to give an indication of the probable type of construction. The successful Tenderers will, however, be required to execute the work as per detailed approved drawings issued to them from time to time. Steel structures can be changed to R.C.C. or vice versa. Owner reserves the right to add / delete any of the building works mentioned in the N.I.T., during the currency of the contract.
- The Tenderers shall note that the quantities of the different Items, as given in the "Schedule of Rates" are tentative based on tentative tender drawings and are subject to variation and they shall not be entitled to claim any higher rate or compensation on this account. Owner / Consultant reserves the right to change / modify the size and type of sections at any time. Owner / Consultant does not guarantee work under each item of the Schedule of Quantities. The total quantum of work may vary up to 25% on either side and nothing extra will be paid on this account. Quantum of individual item may vary to any extent.
- 1.03 The Tenderers shall be fully responsible for the correct setting out and execution of the work in accordance with approved drawings which will be supplied to them progressively. All tools, tackles, construction equipments etc., required for the successful execution / construction of the complete work, shall be responsibility of the Tenderers.
- 1.04 The quantities given in the "Schedule of Rates" are approximate and are given only for the guidance for quoting rates. Payments on bills shall, however, be made on actual measurements of quantities of work done as per approved drawings. Unless otherwise specified, measurements of quantities shall be taken as per Indian Standards IS: 1200.
- 1.05 The Percentage to be quoted against the "Schedule of Rates" are to be inclusive of the value of the work described under several items including all costs and expenses which may be required for the construction of the work described together with all taxes, general risks, liabilities and obligations such as temporary buildings / hutments, fencing, watching, lighting, insurance, labour regulations, indemnity, maintenance and the like. The prices shall be inclusive of all labours, materials, tools, plants, equipment, hoists, tackles, scaffoldings, the sundries, etc., as may be necessary for the completion of the work in all respects.
- 1.06 No work shall be undertaken at site until detailed approved drawings have been issued by the Owner / Consultant in writing. Subsequent revision in the drawings which become necessary shall be incorporated and revised drawings issued to the Contractor who shall execute the work as per the latest revised drawings. Nothing extra will be paid on this account and no claim whatsoever will be entertained on this account. The Owner / Consultant reserves to them the right to modify / revise / alter etc. in any drawing supplied to the Contractor.



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- 1.07 Any fabrication / construction done before final approval of the drawings shall be the Contractor's responsibility.
- 1.08 In case of any discrepancy between the description of items given in the "Schedule of Rates" and Specifications, drawings and other documents, the decision of the Owner / Consultant in writing shall be final, binding and conclusive for the purpose of this contract.
- 1.09 The term "Design and drawings" mentioned in the description of Items in the "Schedule of Rates" means the detailed approved design drawings marked "Good for Construction".
- 1.10 The work "As described", "As shown", "As directed" or "As approved", "As mentioned" in the description of Items shall mean as directed in design or detailed drawings and as directed by the Engineer-in-Charge.
- 1.11 The Owner shall furnish the Contractor with only reference points of the job site and a level bench mark, and the Contractor shall at his own cost and initiative, set out the works to the satisfaction of the Engineer-in-Charge but shall solely be responsible for the accuracy of such setting up not withstanding satisfaction as aforesaid of the Engineer-in-Charge or any other assistance rendered by the Engineer-in-Charge for the purpose.
- 1.12 The Contractor shall provide, fix and be responsible for the maintenance of all stakes, templates, level marks, profiles and the like and shall take all precautions necessary to prevent their removal or disturbance, and shall be responsible for the consequence of such removal or disturbance and for their efficient and timely reinstatement. The Contractor shall also be responsible for the maintenance of all survey marks, boundary marks, distance marks and centre line marks, whether existing or supplied / fixed by the Contractor.
- 1.13 Before commencing the work, the Contractor shall at his own cost and initiative provide all necessary references, level posts, pegs, bamboos, flags, ranging rods, strings and other materials for proper layout of the work in accordance with the scheme for fixing bench marks acceptable to the Engineer-in-Charge. The centre of longitudinal or face line and cross line shall be marked by means of small masonry pillars. Each pillar shall have distinct mark at the center to enable a TOTAL STATION to be set over it. No work shall be started until all these points are approved by the Engineer-in-Charge in writing.

But such approval shall not relieve the Contractor of any of his responsibilities in respect of the adequacy or accuracy, thereof. The Contractor shall also provide all labour, material and other facilities necessary for the proper checking of layout and inspection of the points during construction.



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- 1.14 Pillars bearing geodetic marks located at the site / unit of works under construction should be protected and fenced by the Contractor.
- 1.15 On completion of works, the Contractor must submit to the Engineer-in-Charge the geodetic documents according to which the work was carried out.
- 1.16 The Contractor shall be exclusively responsible for the provision and maintenance of horizontal and vertical alignments and levels and for the correctness of every part of the work in accordance there with and shall at his own cost rectify any errors or imperfections therein.
- 1.17 The Contractor shall at all times during the progress and continuance of the works be responsible for and effectively maintain and uphold in good, substantial, sound and perfect condition of all / and every part of works and shall make good from time to time and at all times as often as the Engineer-in-Charge shall require any damage or defect that may during the above period arise in or be any way connected with works.
- 1.18 The portion which is under HOLD shown in the approved drawing or the portion which would be brought under HOLD during execution on account of coordinating different activities of other working agencies shall be taken up by the Contractor to execution only after the said HOLD is withdrawn. The Contractor on this account shall not be entitled to claim for any compensation.
- 1.19 The Contractor shall maintain adequate drainage facilities at the work site at all times during the execution of the work.
- 1.20 No compensation shall be made by the Owner / Consultant for any damage done by rain or traffic during the execution of the work.
- 1.21 The Contractor shall afford all reasonable facilities such as scaffolding etc., and cooperation to the various other agencies and Contractors, for services not included in this contract, who may be working on the site simultaneously so that entire work can proceed smoothly and simultaneously to a successful completion. The Tenderer must take all the aforesaid factors into consideration while quoting his rates. Nothing extra shall be paid on any ground out of or relating to the aforesaid factors.
- 1.22 For details of works, materials and workmanship, attention is invited to the "Schedule of Rates", Scope Drawings, Special Conditions of Contract, Materials and Job Specifications, this section, etc. and the Tenderers must quote the rates keeping in full view the requirement of the said documents.
- 1.23 Except otherwise clearly stated, CPWD Specifications with Correction Slips (latest) shall be followed in all Civil, Structural and other allied Works and in absence of CPWD Specifications for any work, relevant Indian Standard codes of practices (latest) shall be followed. Where there are no Specifications available for any work either in CPWD Specifications or in IS Codes of practices, the work shall be carried out as per the direction of Engineer-in-Charge.



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1.24 The following notations have been used throughout the "Schedule of Rates" and Materials and job Specifications:

1.	Cu.M	Cubic Metre
2.	Sq.M	Square Metre
3.	m.	Metre
4.	mm	Millimeter
5.	Cm. / Cms.	Centimeter / Centimeters
6.	No. / Nos.	Number / Numbers
7.	Tonne / Te.	Metric Tonne
8.	Kg.	Kilogram
9.	RCC	Reinforced Cement Concrete
10.	PCC	Plain Cement Concrete

- 1.25 The percentage to be quoted shall be applicable for all heights, depths etc. except otherwise clearly stated in the description of items and nothing extra shall be paid to the contractor on this account.
- 1.26 Description of items and mode of measurement for payment indicated herein shall override those given elsewhere if these are at variance.
- 1.27 Any materials / accessories / fittings etc. which may not be specifically mentioned in the description of items but which are normally used or necessary are to be provided by the contractor without any extra cost to Owner / Consultant and the work must be completed in all respects.

2.00 DEFINITION OF PLINTH

- 2.01 The portion of a structure between the surface of the finished ground and the surface of the floor immediately above the ground will be considered as plinth, which is generally 300 mm to 600 mm above finished ground level of the site area.
- 2.02 Plinth Level as shown in the drawing shall be treated as plinth level for the purpose of payment.

3.00 MATERIALS

- 3.01 The supply / procurement of all materials, required for the job, shall be the responsibility of the Contractor unless otherwise stated in the "Schedule of Rates" and elsewhere in the tender documents. The quality of the materials procured by the Contractor shall be subject to the approval of Engineer-in-Charge or his authorized representative before the materials are allowed to be used in the works. All the materials to be procured by the Contractor shall be in conformity with the CPWD Specifications with correction slips (latest) and in absence of which as laid down in the relevant Indian Standard Codes of practices (latest).
- 3.02 Transport of all materials shall be the Contractor's responsibility and it shall be at their own risk and cost.



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The Engineer-in-Charge shall determine the suitability of materials to be used on the job and the Contractor shall get all materials approved by the Engineer-in-Charge. Any material procured and brought to site by the Contractor, found not to conform to the specifications and does not meet the approval of the Engineer-in-Charge, for use, will be rejected, and the Contractor shall remove and dispose off the same at his own cost and he shall not have any claim for compensation in this regard.

4.00 TESTS

- 4.01 According to the nature and importance of works, Owner / Consultant will demand the conduct of tests on concrete and other building materials etc., in which case the Contractor shall get the same done at his own cost in a laboratory to be approved by the Owner / Consultant.
- 4.02 Providing and operating necessary measurements and testing devices, materials and consumables are included in the scope of work and the rates quoted shall be deemed to include the cost of such tests which are required to ensure achievement of specified quality of work.

5.00 EXECUTION OF WORK

5.01 PLAIN AND REINFORCED CEMENT CONCRETE WORKS

- a. The prices for concrete beds and slabs are to include for laying on any type of subgrade, laying to falls or camber and for preparing surface to receive concrete.
- b. All concrete surfaces shall be finished to a fair face to give smooth and even surfaces and nothing extra shall be paid on this account.
- c. The prices are to include leaving pockets, cutouts and holes and to provide wooden boxes or any other suitable arrangement in R.C.C for providing pockets for bolts as per approved working drawings and nothing extra shall be paid on this account.
- d. All pockets / holes are to be properly covered by suitable means, so that dirt, rain water etc., should not enter the pockets / holes etc. No deduction in R.C.C quantity shall be made for pockets and nothing extra shall be paid for providing pockets as mentioned in para 5.02c above.
- e. For measurement of openings in plain concrete / R.C.C work, refer clause No. 4.13 of IS: 1200 (Part-3).
- f. Threads of bolts etc., which have already been fixed in the pockets, are to be greased and properly covered with gunny bags or polythene sheet to protect it from damage from all sources and nothing extra shall be paid on this account.

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- g. The prices shall include for all rebating, throating, chamfering, weathering, moulding etc. to accord with the details shown in the approved working drawings.
- h. Nothing extra shall be paid for any intricate work for foundation of equipments and machinery (Static / Dynamic) in R.C.C walls and other superstructure work or in concreting in small and thin sections in P.C.C or R.C.C work.
- i. The prices for concrete are to include for hoisting and / or lowering to any heights and / or depth required and in any type of form work, packing around reinforcement wherever required and finishing the surfaces to fair and even surfaces.
- j. The prices shall include for working up or hacking of concrete surface for providing keys for further concrete work and shall also include all plane, rebated or grooved construction and other joints.
- k. All reinforced cement concrete used shall be of controlled concrete with designed mix and weigh batched conforming to IS: 456 unless otherwise specified. In all concrete and R.C.C work, broken graded coarse aggregate shall be used. The design mixes of concrete of different grades shall be established at the beginning of the work considering the required workability. However, if batching plant facility is not available, only nominal mix concrete is permissible.
- I. Concrete admixtures for workability, if necessary, may be used in R.C.C., if decided by the Engineer-in-Charge. No extra payment for material or mixing etc. shall be made on this account.
- m. Machine and equipment foundations shall mean all foundations including pedestals of vessels, towers, pumps, compressors, motors or any other equipment or machinery (both static and dynamic), pipe supports etc., and / or the like.
- n. The prices shall include applying cement slurry on reinforced cement concrete surfaces, keys of construction joints etc. @ 2.75 Kg/Sq.m of surface area of receiving cement concrete including roughening and proper cleaning etc., complete as directed by Engineer-in-Charge.
- The prices shall include for performing water tightness for all water retaining R.C.C structure as stipulated in IS: 3370 (Part-I), wherever specified in the drawing.
- p. Cement to be used for plain & reinforced cement concrete and other works shall be of Ordinary Portland Cement conforming to IS: 269 unless otherwise stated in the "Schedule of Rates" and elsewhere in this Section of NIT.
- q. Any concrete having honeycomb is not acceptable and shall be rejected and redone at contractor's cost.

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- a. Wastage in cutting will not be paid for. Steel actually fixed in position only will be paid by the linear measurement including hooks and laps. Lapping of bars will be allowed only where the required bar length exceeds the standard lengths available. All other laps provided, unless otherwise specified in the drawings, shall not be measured and paid for. Weight of binding wire shall not be measured for payment.
- Bars shall be issued in lengths and in forms as available in the stores. Nothing extra shall be paid for decoiling and straightening of the bars.
- c. Reinforcement are to be tack welded in addition to binding by 18 S.W.G annealed wire wherever necessary to improve efficiency of the joint. Bars of 28 mm diameter and above shall be provided with stitch weld in addition to binding with 18 SWG annealed wire and nothing extra shall be paid for stitch welding. Welding of mild steel plain and deformed reinforcements shall conform to IS: 2751, 'Code of practice for welding of mild steel plain and deformed bars for reinforced concrete construction'.
- d. The Contractor shall prepare the bar bending schedule for all reinforced cement concrete work as per the approved / "good for construction" drawings furnished by the Owner / Consultant and nothing extra shall be paid on this account.

5.03 Dismantling works

- a. All kinds of excavation for all depths required to be carried out for all kind of dismantling work shall not be paid extra. Similarly, all necessary backfilling after dismantling shall also not be paid extra. Payment for excavation and backfilling is deemed to be included in respective items of dismantling.
- b. All debris / surplus earth generated during dismantling / land development / boundary wall repair work shall be disposed off in area directed inside / outside plant battery limit or in contractor's acquired land outside plant battery limit or in municipal dumping ground, as per direction of Owner / Consultant.

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PART - IV

SCHEDULE OF RATES

FOR

DEMOLITION, LAND DEVELOMPENT & BOUNDARY WALL REPAIR

OF

BARAUNI FERTILIZER COMPLEX

FOR

HURL, BARAUNI



SCHEDULE OF RATES OF DEMOLITION, LAND
DEVELOPMENT & BOUNDARY WALL REPAIR WORKS FOR
HURL'S PROPOSED FERTILIZER PLANT AT BARAUNI

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SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY	RATE (Rs.) (In Figure)	AMOUNT (IN Rs.)
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		PART A- DISMANTLING AND DE	MOLITI	ON WORKS		
1	A-01	Demolition of existing Broad Gauge railway track, including stone ballast, soil, sleepers, rail sections with fixtures etc. complete in all respect & disposal of all unserviceable material outside Plant boundary at location as permitted by Municipal corporation or local authority .Item also includes stacking of serviceable material, Rail sections, metallic sleepers up to demarcated locations inside the Plant boundary as directed by Engineer-in-charge .	m	5500	3000	4500000
2	A-02	Demolishing R.C.C. work manually/ by mechanical means in boundary wall, buildings, structures like silo, prilling tower, pipe rack, conveyers, bagging plant, technical / non technical structures, drains, floors, pavement etc. including stacking of steel bars to demarcated locations inside the Plant boundary as directed by Engineer-in-charge and disposal of unserviceable material outside Plant boundary at location as permitted by Municipal corporation or local authority as per direction of Engineer - in- charge.				
		i) 0-15 m height	Cu.m	4200	1454.55	6109110
		ii) 15-30 m height	Cu.m	2800	1600	4480000
		iii) 0-3 m depth	Cu.m	5500	1454.55	8000025
		iv) 3-5 m depth	Cu.m	455	1500	682500
3	A-03	Demolishing cement concrete manually/ by mechanical means				

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SL.					RATE (Rs.)	AMOUNT
NO.		DESCRIPTION OF ITEMS	UNIT	QTY	(In Figure)	(IN Rs.)
		including disposal of material outside Plant boundary at location as permitted by Municipal corporation or local authority as per direction of Engineer - in - charge.				
		a) Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	Cu.m.	50	997.05	49852.5
		b) Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	Cu.m.	100	615.05	61505
4	A-04	Demolishing brick work in cement mortar manually/ by mechanical means including excavation and backfilling in foundations to make the area leveled to adjoining area. Stacking of serviceable material within owner's premises and disposal of unserviceable material outside plant boundary outside Plant boundary at a suitable location with permission from Municipal corporation or local authority as per direction of Engineer-in-charge.	Cu.m.			
		i) 0-15 m height		4200	842.75	3539550
		ii) 15-30 m height		2800	1000	2800000
		iii) 0-3 m depth		50	842.75	42137.5
5	A-05	Demolishing plinth protection 50mm thick of cement concrete 1:3:6 over 75mm thick bed of dry brick ballast 40 mm nominal size.	Sqm	8000	113	904000
6	A-06	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking to demarcated locations inside the Plant boundary as directed by Engineer-in-charge:				

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SCHEDULE OF RATES OF DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS FOR HURL'S PROPOSED FERTILIZER PLANT AT BARAUNI

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SL. NO.		DESCRIPTION OF ITEMS	UNIT	QTY	RATE (Rs.) (In Figure)	AMOUNT (IN Rs.)
		a) Of area 3 sq. metres and below	each	25	157.85	3946.25
		b) Of area beyond 3 sq. metres	each	25	216.4	5410
7	A-07	Dismantling steel work in joist, channel, angles, tees, flats, built up sections including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking to demarcated locations inside the Plant boundary as directed by Engineer-in-charge.	Te	50	2.4	120
8	A-08	Dismantling IPS/ mosaic /terrazzo/tile floors including stacking material outside Plant boundary at location as permitted by Municipal corporation or local authority.				
		a) For thickness 10 mm to 25 mm	Sq.m.	1000	31.55	31550
		b) For thickness 25 mm to 40 mm	Sq.m.	1000	49.2	49200
9	A-09	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material up to demarcated locations inside the Plant boundary as directed by Engineer-in-charge:				
		a) G.S. Sheet	Sq.m.	100	70.1	7010
		b) Asbestos sheet	Sq.m.	500	32.85	16425
10	A-10	Demolishing water proofing in terracing and disposal of material outside Plant boundary at location as permitted by Municipal corporation or local authority.	Cu.m.	9000	373.95	3365550

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SL. NO.		DESCRIPTION OF ITEMS	UNIT	QTY	RATE (Rs.) (In Figure)	AMOUNT (IN Rs.)
11	A-11	Dismantling C.I. pipes including excavation and taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead up to demarcated locations inside the Plant boundary as directed by Engineer-in-charge .				
		a) Up to 150 mm diameter	metre	500	132	37395
		b) Above 150 mm dia up to 300 mm dia	metre	500	187	93500
		c) Above 300 mm diameter	metre	100	255	25500
12	A-12	Dismantling steel or R.C. pipes including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within Plant boundary at location as per direction of Engineer-in-charge:				
		a) Up to 600 mm diameter	Metre	1000	255	255000
		b) Above 600 mm diameter	metre	500	650	325000
13	A-13	Dismantling asbestos cement pressure pipes including excavation and refilling trenches after taking out the pipes manually/ by mechanical means and stacking the pipes within Plant boundary at location as per direction of Engineer-in-charge				
		a) Up to 150 mm diameter	metre	100	135.7	13570
		b) Above 150 mm diameter	metre	100	164.8	16480

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SL.					RATE (Rs.)	AMOUNT
NO.		DESCRIPTION OF ITEMS	UNIT	QTY	(In Figure)	(IN Rs.)
14	A-14	Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means including stacking of pipes within Plant boundary at location as per direction of Engineer-in-charge:				
		a) 15 mm to 40 mm nominal bore	metre	500	45	22500
		b) Above 40 mm nominal bore	metre	500	50	25000
15	A-15	Dismantling and stacking within Owner's premises as per direction of Engineer-in-charge, fencing posts or struts including all earth work and dismantling of concrete etc. in base of:				
		a) T' or 'L' iron or pipe	Each	25	104.65	2616.25
		b) R.C.C.	Each	25	116.2	2905
16	A-16	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within Plant boundary at location as per direction of Engineer-in-charge:	kg	4500	15.05	67725
17	A-17	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to outside Plant boundary at location as permitted by Municipal corporation or local authority, for all leads including all lifts involved.	Cum	60000	120.55	7233000
				SUB-TOTAL C	F PART-A (Rs.)	5,47,68,082.50
					A (In Rs. Crore)	5.47

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SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY	RATE (Rs.) (In Figure)	AMOUNT (IN Rs.)
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		PAR1	B- LAND I	DEVE	LOPM	<u>ENT</u>					
1	A-01	Felling trees of the girth (mea above ground level), includir branches, removing the r serviceable material and dis material outside the periphery Battery Limits at location as corporation or local authority.	ng cutting of tru oots and stac sposal of unser of the area of t	nks an king d viceabl he Plar	d of e nt						
		a) For girth of 30 cm and mo	ore		Each	n 1	50		219.2		32880
2	A-02	Earthwork in excavation / cut within the Plant battery limits and widths to the required excavation for retaining wall rooting of rank vegetation, gand saplings of girth up to 30 of 1.0 metre above ground le rubbish a location outside th Battery Limits, disposal of ex lead outside Plant boundary by Municipal corporation or I and watering, ramming, excavated / graded top surespects as per Specification and as directed by the Engine a) All kinds of soil	Grade Level is and clearing jury grass brush woo cm measured at evel, removal/ dise periphery of the cavated earth wat location as periphery of the cavated earth	/ depth ncludin ngle, up od, tree a heigh sposal of the Plar ith initial ermitte or all lift ing the in a	s g g g g g g g g g g g g g g g g g g g	n. 26	9050		262.1		70767000
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SL.		DESCRIPTION OF ITEMS			RATE (Rs.)	AMOUNT
NO.				QTY	(In Figure)	(IN Rs.)
3	A-03	Filling / banking the proposed area with available excavated good earth to the required grade levels in layers not exceeding 20 cm in depth including loading unloading, filling, spreading, breaking clods, watering, levelling at site area, consolidating / compacting each deposited layer by ramming, rolling each layer with half tonne roller or wooden / steel rammers and rolling every third layer and the top most layer with minimum 8.0 Tonne capacity power roller up to 95% of maximum dry density of filling materials, dressing up the embankments / graded area within the plant boundary and at all lifts including clearing jungle uprooting of rank vegetation, grass, brush wood, trees, sapling of girth up to 30 cm assumed at a height of one metre above ground level, surface dressing, removal of rubbish / debris outside Plant boundary at location as permitted by Municipal corporation or local authority leaving the site clear and providing tests for required compaction of the surfaces etc., in all kinds of soil complete in all respects as per specifications, approved drawings and as directed by Engineer-in-Charge.	Cu.m.	55160	250	13790000
4	A-04	Same as above with selected good earth (soft / dense soil), brought from outside borrow-pits including payment of all cess/royalty/taxes etc. over above item	Cu.m.	23640	505.9	11959476
				SUB-TOTAL	OF PART-B (Rs.)	10,14,29,606.00
			SUB-TOT	TAL OF PART	T-B (In Rs. Crore)	10.14



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SL. NO.	DESCRIPTION OF ITEMS	UNIT	QTY	RATE (Rs.) (In Figure)	AMOUNT (IN Rs.)
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		PART C- REPAIR OF BOL	JNDAR	Y WALL		
1	A-01	Earthwork in excavation in foundations of footings, columns, plinth beams, walls etc., to the required levels and grades in both dry and wet conditions, including dressing of sides and ramming of bottoms, getting out excavated earth with lift up to 1.5 m and disposal of surplus excavated materials outside Plant boundary at location as permitted by Municipal corporation or local authority including stacking, levelling and dressing etc., complete as per direction of Engineer-in-Charge(E.I.C.) in all kinds of soils as defined in IS: 1200 including providing temporary supports to all service lines such as overhead and underground water, sewage and drain pipes, cables etc. and shoring and strutting wherever necessary, complete in all respects as per direction of Engineer-in-Charge		750	125.35	94012.50
2	A-02	Same as Item No. A-01, but lift from 1.5 M to 3.0 m.	Cu.m	166.67	160	26666.67
3	A-03	Providing and laying in position cement concrete of specified grade - all work up to plinth level, including the cost of centring.				
		a)1:4:8 (1 Cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size).	Cu.m	41.667	4478.2	186591.67
		b) 1:3:6 (1 Cement: 3 coarse sand (zone-III): 6 graded stone aggregate 40 mm nominal size).	Cu.m	3.3333	4814.5	16048.33

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SL. NO.		DESCRIPTION OF ITEMS	UNIT	QTY	RATE (Rs.) (In Figure)	AMOUNT
					(34 4)	(IN Rs.)
4	A-04	Filling with available excavated good earth (excluding rocks / boulders), as approved and directed by Engineer-in-Charge, in trenches, plinth, under floors, sides of foundation etc., at all depths in layers not exceeding 20 cms. in thickness including consolidating and dressing each deposited layer by ramming and watering with lead within plant boundary.	Cu.m	583.33	125.75	73354.17
5	A-5	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level in all shapes & sizes in cement mortar 1:6 (1 cement : 6 coarse sand (zone-III))	Cu.m	291.67	5582.9	1628345.83
6	A-6	Providing and laying in position cement concrete in coping with concrete grade 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size). Including the cost of centring, shuttering and finishing.	Cu.m	41.667	5481.95	228414.58
7	A-7	CEMENT PLASTER (IN COARSE SAND): 12 mm cement plaster of mix 1:6 (1 cement: 6 coarse sand)	Sq.m	1291.7	168.25	217322.92
8	A-8	CEMENT PLASTER (IN COARSE SAND): 15 mm cement plaster on rough side of single or half brick wall of mix 1:6 (1 cement: 6 coarse sand)	Sq.m	1291.7	194.6	251358.33
9	A-9	Supplying Angle iron post & strut of required size including bottom / top to be split and bent at required angle in opposite direction for 100 mm length, drilling holes upto 10 mm dia. And painting with synthetic enamel paint etc. complete.	Kg	83.333	62.05	5170.83

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SL. NO.		DESCRIPTION OF ITEMS	UNIT	QTY	RATE (Rs.) (In Figure)	AMOUNT (IN Rs.)
10	A-10	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with angle iron 'Y' shaped placed 2.4 m or 3.00 m apart and with 9 horizontal and 2 diagonals 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 including providing, fixing/ grouting of Angles, all complete as per direction of Engineer-in-charge, with reinforced barbed tape(R.B.T.) / 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 paid separately)	Meter	500	255	127500.00
11	A-11	Finishing walls with water proofing cement paint of required shade two or more coats applied @ 3.84 kg/10 sqm including one coat of water thinnable cement primer of approved brand.	Sq.m	2666.7	95.75	255333.33
				SUB-TOTAL (OF PART-C (Rs.)	31,10,119.17
			SUB-TO	TAL OF PART-	C (In Rs. Crore)	0.31

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NIT No. : PNPM/5003/E/102

SUBJECT: DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

	SUMMARY OF SCHEDULE OF RATES								
S.NO.	ITEM DESCRIPTION	UNIT	ESTIMATED AMOUNT						
1.	PART A - DEMOLITION WORKS	INR	5.47 Crore						
2.	PART B - LAND DEVELOPMENT	INR	10.14 Crore						
3.	PART C - REPAIR OF BOUNDARY WALL	INR	0.31 Crore						
4.	BIDDER TO QUOTE IN PERCENTAGE ABOVE OR BELOW APPLICABLE FOR PART-A, B & C.	In %	Above: % OR Below: %						
			(in words) : Above% or Below%						
			Note: The Percentage indicated above shall be applicable for all the three parts i.e. A, B & C.						
5.	PART D - MISCELLANEOUS WORKS : THE PERCENTAGE ABOVE OR BELOW DELHI'S CPWD SCHEDULE OF RATES 2016 FOR	ln %	Above CPWD Rates : %						
	MISCELLANEOUS WORKS NOT ENVISAGED IN S.O.R. IN PART 'A', 'B'		OR						
	& 'C' ABOVE, BUT MAY BE REQUIRED TO BE EXECUTED TO COMPLETE THE WORK IN SCOPE (ESTMATED VALUE Rs. 0.80 Crore).		Below CPWD Rates : %						
	BIDDER TO QUOTE IN PERCENTAGE ABOVE OR BELOW APPLICABLE FOR PART-D.		(in words) : Above% or Below%						
6.	GST EXTRA AS APPLICABLE (BIDDER TO INDICATE % ONLY)	In %							

NOTE:

- 1. The Evaluation shall be done on Overall Lowest basis, considering the Rates quoted above on the Estimated Amount for Part-A, B, C & D plus GST rate quoted above at S.No. 6.
- 2. Bidder to indicate Percentage (above or below) for all the four parts i.e. A, B, C & D. If the bidder has indicated "Not Applicable/Not Quoted" in the price bid, their bid will liable to be rejected and will not considered for price evaluation. However, if the bidder has indicated "Nil / Blank", it will be consider as "Nil Percentage" and the Estimated Amount will be considered for evaluation and award in case the bidder becomes successful. Further, if the bidder does not indicate the GST rate or stated Nil / Blank / Not Applicable / NA, GST rate/amount is deemed to have been included in the rates/amount at S.No.1, 2, 3, 4 & 5 above and no payment towards GST shall be made by the Owner.
- 3. Bidder to quote the Percentage (Above or Below) within 2 Decimal places. Digits beyond 2 decimal places will be ignored.
- 4. If, two or more bidders emerge as the Lowest evaluated bidders after evaluation, in such an event, Revised Percentage (which should be lower than Original Quoted Percentage) will be sought from those bidders and Re-evaluation will be carried out for selection of Lowest (L-1) Bidder.

NAME	:	
SIGNATURE OF TENDERER	:	
PLACE / DATE	:	



SCHEDULE OF RATES OF DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS FOR HURL'S PROPOSED FERTILIZER PLANT AT BARAUNI

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PART - V



PROJECTS & DEVELOPMENT INDIA LIMITED

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SECTION-B: TECHNICAL

PART-V

HEALTH SAFETY & ENVIRONMENT (HSE) MANAGEMENT

REV	REV DATE	EFF DATE	PURPOSE	PREPD	REVWD	APPD
Р	13.06.17	13.06.17	ISSUED	DILIP	GC	SM
0	11.07.17	07.07.17	FOR TENDER	DILIP	GC	SM



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1.0 INTRODUCTION

1.1 The purpose of the present document is to outline the minimum safety requirements applicable to personnel, equipment and facilities during erection, pre-commissioning and commissioning activities of OWNER/CONSULTANT Construction Sites. Constructing safe structure and providing safe working environment to the personnel is a vital factor in successful construction business. Safety and health are as much as part of effective project planning and control as the cost, schedules, procurement and quality. Indeed they are all closely interrelated. Productivity, safety and quality can move forward in close proximity.

1.2 **OBJECTIVES**

OWNER/CONSULTANT Site Management has following main objectives regarding safety at site.

- a) No Accident
- b) To make the environment safe
- c) No harm to people
- d) Safety is everyone's responsibility
- e) To make the job safe

2.0 GENERAL

- 2.1 These rules do not exempt the Contractor from statutory Health, Safety and Environmental duties but are intended to assist in attaining a high standard of compliance with those duties, in order to provide a safe and healthy working environment.
- 2.2 OWNER/CONSULTANT will assist Contractors in any practical way to facilitate safe working, and requires full co-operation in observing these rules.
- 2.3 The rules for Health and Safety specified herein are in no way intended to relieve the Contractor from any obligation or liability under the Contract, nor is it intended to relieve the Contractor of any of his legal obligations for the avoidance of accidents.
- 2.4 In all matters arising in the performance of the Contract, the Contractor shall conform with all Statutory Regulations and By-Laws made with statutory authority by Government Departments or by Local or other Authorities that shall be applicable to the Works.
- 2.5 The Contractor, in the performance of the Contract, shall not endanger the safety or unlawfully interfere with the convenience of the public in any manner.
- 2.6 The Contractor's representative on Site shall communicate details of these rules for Health, Safety and Environment to all Contractors' employees and to all Subcontractors and Subcontractors' employees employed on the Site.



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- 2.7 The requirements of the Client/Owner's existing Site Rules/Regulations form part of the Contract and in the case of conflict between the Client's or OWNER/CONSULTANT' rules, the highest standard shall be applied.
- 2.8 At the tender stage OWNER/CONSULTANT will require to see a copy of the Contractor's policy, organization and arrangements for the Health and Safety at Work. The Contractor shall submitted complete documents Health and Safety Questionnaire. Contractor shall deploy safety officer of adequate experience at each work site or during each shift including Sunday/holiday with approval of EIC/Owner.

3.0 SITE HEALTH, SAFETY AND ENVIRONMENT INDUCTION

- 3.1 All personnel shall receive a OWNER/CONSULTANT and Contractors' site Health, Safety and Environment induction before they commence work on site. The induction shall comprise information on the various hazards which they may come into contact with, instructions on the site emergency procedures, warning and alarm systems, and permit to work system, first aid locations, welfare facilities, access routes and project specific rules.
- 3.2 It is the responsibility of the Contractor to familiarize all new personnel to the Project on the actual location of muster points, fire alarm points, first aid stations and the like.

4.0 DEMARCATION

4.1 Construction personnel are restricted to the construction areas shown on the Contract Drawings. Any personnel found on/in or interfering with the existing works/plant, without permission, will be dismissed from site. Any work outside of these areas may only be carried out with the written agreement of OWNER/CONSULTANT and Client.

Before any work is started on the site, the Contractor's representative shall report to OWNER/CONSULTANT, who will confirm to the Contractor's representative, the limits of the working area(s) and shall be informed of any special requirements appertaining thereto.

5.0 ACCESS TO THE CLIENT'S FACILITIES/BUILDINGS

- 5.1 The Client's Facilities, including the canteen/cafeteria and toilets shall not be used by Construction Personnel.
- 5.2 Construction Personnel shall not enter any of the Client's building unless escorted by a member of the Client's/OWNER/CONSULTANT' staff (or working with prior agreement to Client's Permit to Work System).

6.0 BEHAVIOR ON SITE

6.1 All Contractors' personnel shall treat everyone with respect and will refrain from any sexually suggestive or abusive comments or behavior.

7.0 SMOKING, EATING AND DRINKING

7.1 Smoking, eating and drinking is allowed in designated areas.



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8.0 DRUGS AND ALCOHOL

- 8.1 The possession or use of illicit drugs and alcohol on site is not permitted. Anyone who is found, or suspected to be, under the influence of either will be removed from site (subject to the Contractors' disciplinary procedure).
- 8.2 Anyone taking prescriptive drugs shall advise their employer, in particular those drugs that may impair their performance. Their employer may make arrangements to assign them to more suitable work, but shall ensure that the OWNER/CONSULTANT Construction manager is informed without delay.

9.0 PERMIT TO WORK SYSTEM

- 9.1 All construction works will be carried out under a permit to work system. It is designed to protect personnel and plant and consists of an organized and predefined safety procedure. It forms a clear record of all foreseeable hazards which have been considered in advance of construction operations.
- 9.2 The identities of the permit "Issuing Authority" will be OWNER/CONSULTANT and the "Permit Acceptor" will be the Contractor.
- 9.3 The following types of permits will be issued:
 - Clearance Certificate all other permits are invalid without this Certificate, (this
 certificate can be used for general work).
 - Hot Job Work Permit.
 - Electrical Work Permit.
 - Confined Spaces Work Permit.
 - Excavations Work Permit.
 - Working at Height work Permit.
 - Radiography Work Permit.
 - Cold Job Work Permit.
 - Road Closure Work Permit.
- 9.4 deleted.
- 9.5 Written requests for permits must be submitted to HURL at least twenty-four hours in advance and the permits will be issued daily. Permits shall be given to Safety Officers of the contractor, by representatives authorized by Owner in HURL formats.

10.0 ACCESS, SITE PASSES AND SECURITY

10.1 Passes

All personnel and vehicles shall enter and leave the site via the entrance authorized for construction personnel and traffic. Contractors' employees shall not enter any part of the site other than for the purpose of carrying out the Works.



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All personnel shall be issued with a site pass. The site pass must be carried (or displayed on the pass holder's lapel) at all times. Details of all personnel requiring site passes shall be submitted to OWNER/CONSULTANT at least seven working days in advance of the planned start-on-site date. Site passes shall be submitted for inspection on entering or leaving the site, or when requested for inspection by OWNER/CONSULTANT or Security.

Loss of site passes must be reported immediately to Owner/Consultant. Lack of a site pass may mean delay at the site entrance. Owner/Consultant shall not accept any responsibility for lost time or costs incurred.

On completion of their assignment, or termination or their employment, all personnel will return their site pass to HURL

10.2 Security

The security of Contractor's plant, tools, equipment, materials (including free issue materials properly handed-over by Owner/Consultant) are the responsibility of the Contractor. It is the Contractor's responsibility to satisfy themselves that the security arrangements in existence on the site are adequate. The Contractor shall provide any other security measure that he deems necessary for the control and security of Contractor owned equipment and plant, including for free-issue plant and materials, both within the site establishment area and the working areas on the site.

HURL accept no liability for any loss, damage or deterioration to the Contractor's plant tools equipment and materials.

HURL reserves the right to search at random all personnel, any Contractor's employee, or employees of its servants, agents, Contractors or any vehicle entering or leaving the site. Any package or container being taken into or out of the site may be opened and inspected by security staff or any other persons authorized by Owner/Consultant to make such a search or inspection.

It is the Contractor's obligation and responsibility to ensure that OWNER / CONSULTANT' right to search and inspect persons and property, extends to and is brought to the attention of all his personnel.

Personnel shall give all possible assistance and make available any facilities required to assist OWNER/CONSULTANT and the Police in pursuance of the prosecution of any person(s) responsible for alleged malicious damage or loss to the Works or existing installations.

HURL shall not accept any responsibility for the loss or damage of personal effects. The security and safekeeping of personal effects is the responsibility of each individual.

10.3 Construction personnel will not be admitted to the Construction Areas unless they have undergone HURL' induction, and received a security pass.

No Induction, No Pass, No Access to the Site

10.4 OWNER/CONSULTANT reserve the right to deny access to the Construction Site/Areas and/or the Construction Car parks to any person, or vehicle.



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- 10.5 Individuals may be excluded from and refused future entry to the Site and/or Construction Areas for any breach of Safety or Security Rules, or exceeding the speed limit (20 mph on roads leading to the site off the public highway and 5 mph in the construction area).
- 10.6 No plant/skips, waste or materials may leave the Construction Area without the clearance of OWNER/CONSULTANT.
- 10.7 The taking of photographs on the site is prohibited.
- 10.8 Vehicles with children under the age of 16 years or animals onboard will not be allowed access.
- 10.9 Visitors will only be allowed by appointment (two days' notice to OWNER/CONSULTANT is required). Visitors shall be accompanied by a member of the Contractor's team (who has received Health, Safety and Environment Induction) at all times. The visitor will have to obtain a visitor's pass, and be collected from and returned to the main gate.
- 10.10 Each Contractor will keep a daily register of who is on site. The register will record name, pass number, time-in and time-out (records on time-clocks will not be permitted). This information shall be used to check personnel (role call) in the event of an emergency

11.0 PARKING, DELIVERIES AND VEHICLE PASSES

- 11.1 Contractors' personnel shall not be allowed to park any vehicle on the main car park or site.

 All contractors shall park in the Contractors' Temporary Car Park.
- 11.2 The Contractor shall arrange transport between the parking area(s), the main site gate and the Contractor's establishment and working areas if judged to be necessary.
- 11.3 Vehicles used solely for transporting of tools and equipment may be allowed access to the working area(s) for unloading/loading only.
- 11.4 Owners of vehicles parked illegally will have their car pass taken off them and told to remove the vehicle from site. They may have their site pass withdrawn and be refused further access to the Construction Site.
- 11.5 The Construction Areas will be restricted to construction plant and delivery vehicles.
- 11.6 The speed limit on site is 10 mph on the approach roads leading to the site off the public highway and 5 mph on the construction areas

12.0 SITE OPENING AND CLOSING TIMES

12.1 The site will be open from 8.00am to 6.00pm Monday to Saturday. Work outside the agreed normal working hours will be by agreement with HURL (subject to two working days' notice). All applications for out of hour working will identify the scope of work, supervision arrangements and a list of personnel.



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13.0 SITE SUPERVISION

- 13.1 The Contractor must ensure that an employee of suitable seniority and authority, with responsibility for Health and Safety, is always present on site during the course of the Works, to supervise and direct the Works and to receive and implement instructions from OWNER/CONSULTANT. Seven days before commencing works on site, the Contractor must notify OWNER/CONSULTANT of the name of that employee.
- 13.2 All supervisory staff shall be made aware of their responsibilities for safety.

14.0 TRAINING, COMPETENCE OF EMPLOYEES AND NOTIFICATION OF HAZARDS

14.1 Each Contractor must ensure that all his supervision and employees have had adequate safety training and are experienced to carry out their work safely, prior to starting on site. Training should be continuous throughout a project and should include regular toolbox discussions, (on site briefings at the start of each working day/shift).

To this end, the Contractor must also ensure that specific hazards likely to be experienced on the Site, whether notified to them or discovered by them, are notified to their workforce together with any precautions to be taken and local rules to be observed. Similarly, such hazards should be notified to their Subcontractors and, where discovered by them, to OWNER/CONSULTANT.

14.2 Where particularly severe or unusual hazards may arise on site, OWNER/CONSULTANT reserves the right at no additional cost to request Contractors' employees to attend special safety training and instruction sessions, whether carried out on site or externally. OWNER/CONSULTANT also requires Contractors' employees to undergo specified induction safety training. These aspects should be checked prior to submission of Tenders or execution of the works.

15.0 METHOD STATEMENTS

- 15.1 Contractors shall submit Safety Method Statements for all work activities, for example:
 - Piling Operations.
 - Excavation works.
 - Lifting operations, as specified.
 - Steel erection.
 - Hot work operations.
 - Radiography/NDT.
 - Entry into confined spaces.
 - Pressure testing.
 - Working at height.
 - Shot fired tools.
 - Installation of pre-cast concrete planks.
 - Pre-cast concrete structure.
 - The erection of safety nets and fall arrest equipment.



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Safety method statements must also be submitted for activities which have been identified as being of significant risk during the risk assessment process and activities selected by OWNER/CONSULTANT.

- 15.2 All Safety method statements must be submitted to OWNER/CONSULTANT at least seven days before planned commencement of the works.
- 15.3 The Safety method statement shall detail:
 - The job to be undertaken.
 - The individual activities required to complete the job.
 - The individual trades/disciplines involved in each activity.
 - Plant, equipment and tools be used in each activity.
 - Any substances/chemicals to be used and where, and during which activity they will be used (together with a COSHH assessment).
 - The Name(s) of the Supervisor(s) for each activity.
 - The Name of the person in overall charge of the job.
 - A detailed description of how the work will be done including control measures and procedures to complete each activity and the overall job safety.
 - All hot work.
- 5.4 Compliance with the contents of the safety method statement shall be monitored on a daily basis and addressed during Contractors' safety management meetings.
- 15.5 The Contractor must ensure that employees executing the works are fully briefed and are made aware of the details within the approved Safety Method Statements, prior to starting the task, this includes highlighting hazards associated, associated risk assessments and reduction measures.

16.0 RISK ASSESSMENTS

- 16.1 Contractors will be required to produce risk assessments for all works under their control. The risk assessment shall be submitted as part of the Safety Method Statement to OWNER/CONSULTANT at least seven days before the job commences, and include the following information:
 - Identification of all hazards applicable to significant risk activities.
 - Details of measures in place to control the risk.
 - Justification that the existing control measures are adequate or if not, a detailed action plan on how the risk(s) shall be controlled.
- 16.2 The use of Generic Risk Assessments is only acceptable if they follow the logical progression of the method statement and that specific operation, otherwise, task specific risk assessments will be required.
- 16.3 All risk assessments must be communicated to the workforce who will be responsible for undertaking the work.

17.0 COMPLIANCE WITH STATUTORY REGULATIONS



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17.1 Contractors shall carry out their work in accordance with statutory legislation.

It is the duty of the Contractor to have knowledge of all relevant legislation and take account of it in the planning and execution of the work on OWNER/CONSULTANT' Sites.

18.0 INFORMATION TO BE PROVIDED AND POSTED

- 18.1 Contractors shall have in place, and issue to OWNER/CONSULTANT the following documents or information prior to commencement of their work, (where detailed within these rules):
 - 18.1.1 Safety, Health and Environmental Policy.
 - 18.1.2 Employer's Liability Insurance Certificate.
 - 18.1.3 A detailed Health, Safety and Environment Plan, compliant with the project plan developed by the Planning Supervisor and/or Principal Contractor.
 - 18.1.4 Work Method Statement Lifting Studies.
 - 18.1.5 COSHH Procedures and Assessments.
 - 18.1.6 Noise Procedures and Assessments.
 - 18.1.7 Name of the individual appointed as the Site Safety Supervisor/Advisor.
 - 18.1.8 Test certificates and examination for lifting gear, plant and appliances to be used on site. (Duplicates to be provided for OWNER/CONSULTANT's records.)
 - 18.1.9 Drawings and calculations relating to false work, designed scaffolds, ground works and supporting temporary works.
 - 18.1.10 Details of young persons to be employed on site.
 - 18.1.11 Information relating to hazards associated with plant, operation and materials used in the works.
 - 18.1.12Proof of training for all personnel engaged in the works.
 - 18.1.13 Daily Labour Returns.
 - 18.1.14Monthly Return of Accident Statistics to submitted OWNER/CONSULTANT format (Nil returns required).
 - 18.1.15Personal Injury Report to submitted to OWNER/CONSULTANT format (all injuries, however minor, to be reported). OWNER/CONSULTANT may request a detailed investigation into an accident. OWNER/CONSULTANT' decision on which incidents require detailed investigation is final.
 - 18.1.16 Dangerous Occurrences, Incidents, Damage to Equipment and/or Property report to be submitted to OWNER/CONSULTANT format.
 - 18.1.17All entries/records of accidents entered into the Contractor's Accident Book shall also be copied into OWNER/CONSULTANT' Accident Book by the Contractor.
 - 18.1.18Copies of all Statutory Registers to be submitted weekly to OWNER/CONSULTANT.
 - 18.1.19Copies of the Contractor's Safety Officer/Advisor's reports of their findings on site visits/inspections.

18.2 Accidents, Incidents, Dangerous Occurrences and Notifiable Diseases

18.2.1 Accidents/Incidents/ Dangerous Occurrences/Near Misses

All accidents/incidents/dangerous occurrences/near misses must be notified to OWNER/CONSULTANT immediately, and a report prepared.

For reportable incidents, a copy the report to the Authority must be submitted to OWNER/CONSULTANT on completion but no later than two calendar days after the accident.



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18.2.2 OWNER/CONSULTANT reserves the right to decide which accident, incidents or minor injuries shall be Investigated, and to what extent/format/contents of any investigation.

Note: All such notification or reports to OWNER/CONSULTANT do not release the Contractor of his statutory duties to report such matters to the Authorities by the quickest possible means (viz, telephone, fax and e-mail) immediately following the incident/accident.

19.0 PERSONAL PROTECTIVE EQUIPMENT/CLOTHING

- 19.1 All personnel on a OWNER/CONSULTANT' site must wear as a minimum safety helmet, hivis vest, safety glasses and protective footwear. Additional personal protective equipment may be required dependent on the tasks being undertaken or as dictated by the risk assessment.
- 19.2 Contractors shall provide all necessary personal protective clothing and equipment for their employees and renew as necessary. Records of the issue of such equipment must be maintained for inspection by OWNER/CONSULTANT.
- 19.3 The Contractor shall:
 - Provide personal protective equipment which is comfortable and fit for purpose.
 - Maintain and clean personal protective equipment.
 - Replace free of charge defective, broken or lost personal protective equipment.
 - Provide storage for personal protective equipment when not being used.
 - Ensure that personal protective equipment is properly used.
 - Give training, information and instruction on its use to employees.
 - Ensure that all personnel wear suitable clothing at all times (no shorts, no sports shirts and no colours that may invite aggression - HSE "Keep Your Tops On" is enforced).
 - OWNER/CONSULTANT reserves the right to direct the contractor to change/replace personal protective equipment if they determine that it is unsuitable or inadequate for its proposed use.

20.0 SUBSTANCES (Control of Substances Hazardous to Health – COSHH)

- 20.1 Substances hazardous to health must be identified prior to taking them onto site and, if they cannot be substituted or eliminated, assessments stating how the substances will be controlled and what precautions will be introduced must be carried out and recorded in writing by a competent person. This assessment must be communicated to, and understood by, the members of the workforce who are likely to come into contact with the substance(s). A copy of all assessments should be submitted to OWNER/CONSULTANT.
- 20.2 Hazardous substances may only be brought to site with OWNER/CONSULTANT' permission. They shall be kept to a minimum and must be stored in secure, appropriate containers with the contents clearly labelled. The containers must be stored in a secure area, preferably quarantined from the main stores areas, with suitable warning notices and signage posted.



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- 20.3 Hazardous materials must not be allowed to discharge into natural watercourses or drainage systems.
- 20.4 All hazardous material waste must be kept separate from normal waste and be disposed of in a specialist disposal facility.

21.0 NOISE

- 21.1 When any operation of a Contractor is likely to expose any employee on site to an average noise level of 85 dB(A) and above, an assessment shall be carried out, by the Contractor, and records maintained for OWNER/CONSULTANT' inspection. In such circumstances, the Contractor must keep stocks of adequate ear defenders or other suitable hearing protection.
- 21.2 In addition to the foregoing, noise must be kept to a minimum at all times and must not exceed acceptable and/or locally specified rules and conditions relating to noise imposed by the Contract. Due regard must always be given to noise levels, and their effects on the local community and persons not involved in the operations. Permissible times for noisy work operations, and other restrictions, may be imposed by the Local Authority. Contractors receiving Notices or Prohibition Notices under the related legislation must notify OWNER/CONSULTANT of such Notices.

22.0 FIRST AID

- 22.1 All Contractors shall provide or ensure that they are provided with, such equipment and facilities as are adequate and appropriate in the circumstances for enabling first-aid to be rendered to any of their employees if they are injured or become ill at work.
- 22.2 No work shall commence on site until Contractors have trained first aid personnel on site. Contractor at all times during execution, shall station at site an emergency vehicle without any extra cost or claim.

23.0 TOOL BOX TALKS

23.1 Tool Box Talks will be implemented by all Contractors. The agenda for these talks will be agreed with OWNER/CONSULTANT prior to the commencing of work.

24.0 HEALTH, SAFETY AND ENVIRONMENT INSPECTIONS/HEALTH, SAFETY AND ENVIRONMENT ADVISORS

- 24.1 The OWNER/CONSULTANT' Health, Safety and Environment Engineer/Advisor will visit the sites and carry out Site Safety Inspections. Contractors must co-operate in these inspections. Whenever Contractors' own Health, Safety and Environment Advisors visit site they must report their arrival and departure to the OWNER/CONSULTANT' Senior Representative, and provide a report of their findings and any necessary corrective action to be undertaken.
- 24.2 Contractors on the project must provide a full-time site based Health, Safety and Environment Advisor, when the intensity of the work requires or at the request of the OWNER/CONSULTANT.



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24.3 Contractors who do not have full-time site based Health, Safety and Environment Advisors, shall ensure that their Health, Safety and Environment Advisor visits site once per week as a minimum.

24.4 Appointment of Health, Safety and Environment Supervision

The Contractor shall appoint safety supervision. The name of each appointee, together with evidence of his or her competence to carry out the requirements of the role, shall be submitted to OWNER/CONSULTANT for their approval.

25.0 HEALTH, SAFETY AND ENVIRONMENT MEETINGS

- 25.1 Health, Safety and Environment will form part of the agenda at all Site Progress Meetings. The Contractor's Safety Advisor may be asked to attend these progress meetings.
- 25.2 Once per month OWNER/CONSULTANT' Resident Construction Manager shall convene a Health Safety and Environment Meeting of all Contractors. Attendees at the meeting shall be all Contractors' Safety Advisors and Site Managers.

26.0 HEALTH, SAFETY AND ENVIRONMENT COMMITTEES AND SAFETY REPRESENTATIVES

26.1 OWNER/CONSULTANT encourage the workforce to nominate Safety Representatives as a way of improving communication on Health, Safety and Environment issues. Wherever Contractors' Safety Representatives have been appointed, OWNER/CONSULTANT must be informed of their appointment in writing.

27.0 HOUSEKEEPING

- 27.1 Contractors are expected to carry out their work in a clean, safe and orderly manner.
- 27.2 Dust shall be kept to acceptable levels for the work being carried out. Waste materials and rubbish shall be cleared up as the work progresses and not left to introduce a safety hazard for other personnel engaged on the works.
- 27.3 Construction waste should never obstruct emergency exit routes, Firefighting equipment, emergency alarm call points or other emergency facilities.
- 27.4 From time to time as judged necessary, at the expiration of the contract, or when instructed to do so by OWNER/CONSULTANT, the Contractor shall undertake to clean and tidy his areas of occupation and work to the satisfaction of OWNER/CONSULTANT. Should the Contractor fail to do this, OWNER/CONSULTANT reserves the right to remove all offending materials and debris and to deduct the cost of this operation from the Contract Price. OWNER/CONSULTANT accepts no responsibility for any materials and/or tools which may be removed during this operation.
- 27.5 The Contractor must ensure that the following requirements are strictly enforced:



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- Ample provision of refuse bins for all rubbish including organic waste such as food scraps, etc.
- Daily clearance of all such bins to the area designated for this discharge.
- No discharge of deleterious matter such as oils or other industrial waste.
- 27.6 All site offices, toilets, eating facilities, changing rooms, drying areas, stores, etc, which are the responsibility of the Contractor, shall be cleaned daily as a minimum by the Contractor. These facilities shall be checked for vermin on a two weekly rota.

28.0 FIRE PREVENTION

- 28.1 Before welding, flame or arc cutting of metals, or other processes involving heat or naked lights are permitted, a fire risk assessment shall be carried out by the contractor and arrangements agreed with OWNER/CONSULTANT who will issue a Permit to Work.
- 28.2 Contractors shall familiarize both themselves and their employees with the fire safety arrangements, fire alarms, means of escape and emergency evacuation procedures.
- 28.3 Before leaving the premises and site, contractors shall ensure that naked lights and other ignition sources have been extinguished and electrical apparatus, where practicable, switched off and/or disconnected.
- 28.4 Contractors shall store Highly Flammable Liquids and Liquefied Petroleum Gases in a manner approved by OWNER/CONSULTANT.
- 28.5 OWNER/CONSULTANT' fire protection equipment shall only be used in an Emergency. Fire extinguishers/fire blankets for use when carrying out hot work shall be provided by the Contractor.

29.0 REMOVAL OF WASTE FROM CONSTRUCTION SITES

- 29.1 The removal of waste shall only be undertaken by Licensed Waste Carriers.
- 29.2 Where there is any doubt of the composition of excavation spoil, it must be analyzed before it is removed from site.
- 29.3 Evidence of compliance shall be submitted to OWNER/CONSULTANT prior to the removal of any waste from site.
- 29.4 Controlled waste is any kind of household, industrial or commercial waste. This includes, for example:
 - Scrap metal.
 - Building, construction, demolition and excavation waste, including waste from any repair or renovation.
 - Clinical waste.
 - Anything which is unwanted because it is surplus, broken, worn out, contaminated or spoiled in some other way.



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Controlled waste disposal must be managed via a chain of transfer notes, maintained by the contractor and readily retrievable for OWNER/CONSULTANT' inspection.

Note: Soil Report and Soil Data are detailed in the Tender Enquiry Document

30.0 EXCAVATIONS AND OPENINGS

- 30.1 No excavation work shall be commenced by the Contractor unless a valid excavation permit has been issued. The Contractor shall have on site at all times while excavation work is being carried out, detection equipment which meets the latest technology.
- 30.2 Prior to the start of any excavation, OWNER/CONSULTANT shall be consulted and the presence of overhead and buried service records shall be checked. Where "live" services are present, hand excavation must be carried out until the location of the service has been identified, recorded and made safe.
- 30.3 The Contractor must erect suitable solid edge protection (i.e., double handrails) around excavations or openings. During the hours of darkness any excavations, openings or obstructions near or on roadways and walkways must be indicated by a sufficient number of warning lamps.
- 30.4 The sides of all excavations should be properly shored, battered or stepped to prevent collapse. No excavation work shall commence unless there are adequate resources present to ensure the stability of the excavation. Excavations shall be inspected prior to, or re-commencement of the work to ensure the excavation is still in a safe condition.
- 30.5 All excavations shall have a proper ladder access point provided.
- 30.6 Spoil from excavations must be piled at least 1m from the edge of the hole.
- 30.7 Vehicular traffic shall be restricted from the edges of excavations, to prevent possible collapse.

31.0 ELECTRICITY

- 31.1 All Contractors must provide their own electrical power supplies.
- 31.2 Contractors must not interfere with, or work on any of, the Client's electrical installations or equipment without written consent.
- 31.3 Where Contractors have to work in the vicinity of electrical equipment they must carry out a risk assessment prior to commencement of any works.

ALL EQUIPMENT MUST BE TREATED AS "LIVE" UNLESS ISOLATED/LOCKED OFF AND TAGGED.

31.4 Repair or installation of any electrical equipment must only be carried out by a competent qualified electrician.



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31.5 The electrical supply to powered hand tools must not exceed permissible volts, centre tapped giving appropriate volts to earth. Where this is not possible, due to the type of tool being used, the approval of OWNER/CONSULTANT must be sought in writing.

Electrical lighting for use in confined spaces must not exceed 24 volts (and be explosion proof where applicable). Powered hand tools used in confined spaces should, where possible, be air operated.

31.6 Contractors requiring to install temporary electrical supply equipment shall submit a temporary electrical supply procedure to OWNER/CONSULTANT for approval. The procedure shall, where necessary, cover installation of 380/440 volt system, installation of 110 volt system, lighting system, welding equipment installation, inspection testing operation and maintenance of temporary electrical systems.

31.6.1 **Distribution Boards** - Semi-permanent or Long Term

These should be accommodated in weatherproofed locations and be so arranged, if possible, that they will not need to be moved during the Contract. They should be proofed against interference or unauthorized operation and they should be large enough to accommodate all the necessary apparatus required. Each circuit should be clearly labeled and a circuit diagram should be located at each board.

31.6.2 **Distribution Boards** – Temporary

These are usually small portable panels or boards containing two or three socket outlets. They must be of robust construction, preferably all-insulated and should be supplied by heavy duty flexible cables, these cables shall not be spliced. Socket outlets, plug connectors and cable couplers should comply with High Standards or equivalent industry standard.

31.6.3 Distribution Cables

These cables run from the main distribution boards to the local distribution boards throughout the site.

The cables will normally be multi-strand multi-core armored PVC cables but, in certain cases, may take the form of Mineral Insulated Copper Clad (MICC) cables. The latter type should be sheathed with PVC.

The installation must be so arranged as to prevent the need for long trailing cables. Socket outlets should be located as near the working point as possible.

Power and lighting circuits should be kept separate.

A full record should be made of all parts of the installation and should be kept up to date when alterations or extensions are made.

31.6.4 Underground Cables

Cables may be provided by the Contractor and laid underground or overhead to connect the supply or metering point to the semi-permanent site distribution boards.



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The cables must be suitable for the duty and loading expected, e.g., armored PVC cables.

The cables should be buried at a safe depth or taken from a height so as not to obstruct the movement of persons and vehicles and their routes clearly marked both on the site and on the site plans.

The cables should be properly terminated and be provided with efficient circuit protection.

Cable routes should be so arranged that the minimum of obstruction is caused. The cables should be treated with care and given the same supervision and protection as other cables.

- 31.7 No temporary electrical supply shall be installed or modified without the agreement and approval of OWNER/CONSULTANT.
- 31.8 Any tool, plant or equipment exceeding 110 volts (55v to earth) shall be connected to an earth leakage circuit breaker (ELCB).

32.0 WORK IN CONFINED SPACES

32.1 All work in confined spaces must be covered by a safety method statement.

Safety method statements for work in confined spaces should include arrangements for the following as a minimum:

- Issue of a permit to work
- Work scope and method.
- Nominated Supervisor.
- Tally man.
- Rescue procedures and equipment.
- Training.
- Tools and equipment to be used, including low voltage or pneumatic.
- Lighting requirements, including standby/emergency.
- Explosion proof fittings.
- Low voltage or pneumatic tools.
- Ventilation.
- Access.
- Bonding to prevent both electrical shock and static discharge.
- Work cycles, to reduce risk of heat exhaustion.
- Fire safety and extinguisher requirements.
- 32.2 Contractors shall not enter or commence work in any excavation, tank, vessel, pipe or chamber or other enclosed space, until a valid permit to work has been issued. Where Contractor's operations result in a dangerous atmosphere arising during the monitoring of the work activity, the permit to work issuing authority must be informed and all personnel removed from the area.

No new activity shall be introduced into a confined space without the permission and signed approval of the permit to work issuing authority.

Whilst work is ongoing within a confined space, the Contractor will be required to provide a trained standby/tally man.



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32.4 All personnel who have to enter confined spaces must have undertaken the training appropriate to this task.

33.0 MOBILE CRANES

- 33.1 All cranes (including piling rigs, fork lift trucks, mobile elevated work platforms, hand lorries and similar equipment), whether owned by the Contractor or hired, must carry relevant test certificates and thorough examination reports, together with the manufacturer's handbook. Copies of this documentation must be submitted to Owner/Consultant prior to commencing work.
- 33.2 Only persons who are certificated as competent and authorized shall be allowed to operate cranes. The Contractor must be able to prove the competence of their employees to operate such equipment prior to its use.
- 33.3 Crane operators or other competent persons must carry out daily inspections and enter these in the crane register. Failure to maintain the register properly may lead to suspension of operations. This obligation is the responsibility of the crane hirer when he is supplying the crane and the operator. In addition, the Contractor will implement a regular inspection and maintenance programme to ensure that all components of the lifting device are in good condition.
- 33.4 Travel routes for cranes and crane standing must be agreed with OWNER/CONSULTANT in order to avoid such things as overhead lines and other structures, underground services, excavations, made up ground, etc. Load spreader pads of sufficient size and thickness area, and of suitable material, e.g., metal plates, timber, etc, are to be placed under each outrigger foot, before all crane lifting operations are allowed to commence.
- 33.5 Crane duty charts (Load Radius Tables) must be displayed on or be available in the crane for easy reference. In addition, crane manufacturers' rigging/de-rigging instructions must be available on site. During rigging/de-rigging of jibs/booms, provision must be made to support sections/either side of rigging points, from below, utilizing tightly packed blocks.
- 33.6 All cranes shall be fitted with:
 - A reverse warning audible alarm.
 - Load radius indicator.
 - Automatic safe load indication.
 - Crane hooks with safety catches.

All of which must be serviceable.

- 33.7 All lifting equipment accompanying the crane shall comply with the requirements of lifting regulations.
- 33.8 The assembly, rigging and de-rigging of any crane components, including fly jibs, shall only be done under the supervision of a competent lifting supervisor. An approved risk assessment, together with the manufacturers' rigging/de-rigging instructions must be in place covering rigging activities for the equipment.



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- 33.9 Every Contractor involved in lifting operations with a crane (including a piling rig) or mobile crane shall appoint, in writing, a lifting supervisor to oversee all lifting operations.
- 33.10 No crane shall travel with a suspended load.
- 33.11 Outriggers, when installed, must always be used.

34.0 LIFTING OPERATIONS

- 34.1 A Lifting Study and Safety Method Statement must be prepared for all heavy lifts exceeding 10 tons, or of a complex nature, e.g., tandem lifts or as specified by the Construction Manager (or the Rigging and Lifting Supervisor) and submitted to OWNER/CONSULTANT for review.
- 34.2 Every lifting operation must be properly planned by a nominated, competent person.
- 34.3 Every lifting operation shall be appropriately supervised.
- 34.4 All slinging and rigging of loads must be carried out by competent personnel.
- 34.5 Clear communications between the crane operator and the person responsible for controlling the lift must be established.

All statutory Inspection Reports/Certification/Documentation and proof of the driver's training shall be photocopied and handed to OWNER/CONSULTANT prior to the setting up of the crane. Certification for lifting equipment to be used in the lift shall be identified and cross checked with the item of plant

35.0 STEEL ERECTION

- 35.1 The weight of each component in excess of 500 kg shall be clearly marked upon it.
- 35.2 Erectors must be fully informed of the correct erection sequence, by their supervisor, prior to each stage of work commencing.
- 35.3 Vertical access provision should, whenever possible, be fixed to the steel before it is lifted into position. Where this is not possible permanent access, ie, stairways or permanent metal ladders, shall be installed as early as possible.
- Where horizontal access along structural members is required, as much work as possible must be completed before the steel is lifted into position. This includes:

Fixing of handrails or posts for securing steel wire ropes to be used in conjunction with safety harnesses or inertia reels.

The fixing of scaffold tubes (needles) to the lower flange of an I-beam to allow a working platform to be erected.

Where scaffold tubes (needles) are used they shall not support a working platform wider than three boards, or one lightweight staging without being "picked up".



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Where no ladder access, permanent stairway, etc, leads onto working platforms, as described above, employees must use man riding baskets or mobile elevated work platforms as far as reasonably practicable to access working areas.

36.0 SCAFFOLDING

- 36.1 All scaffolding must be of good quality, be erected in compliance Good Practices for Access and Working Scaffolds, and special scaffold structures in steel. In addition to the main guard rail, an additional guardrail is required such that the gap between the toe-board and main guardrail does not exceed 470mm and all boards must be secured, without causing a tripping hazard.
- 36.2 All scaffolding shall be erected, modified and inspected by qualified competent scaffolders.
- 36.3 Where materials are to be positioned on scaffolding the Contractor's supervision must ensure that the scaffolding is not overloaded.
- 36.4 Before use, scaffolding shall be inspected by an authorized Scaffold Inspector who shall complete a "scaffold tag" and secure it in a prominent position at the base of all ladder access points. The scaffolding tag will clearly show the following information as a minimum:
 - Location.
 - Reference number.
 - Requested by.
 - Access Scaffold Classification.
 - Maximum distributed load/working lift.
 - Maximum number of working lifts to be used simultaneously.
 - Date erected.
 - Erected by.
 - Inspected by.
- 36.5 Scaffolds shall be inspected at weekly intervals or after storms by the authorised Scaffold Inspector who shall sign and date the "Scaffold Tag" after each inspection. Scaffolding not considered safe shall have the Scaffold Tag withdrawn and a prominent "DO NOT USE" sign displayed.
- 36.6 A scaffold register shall be maintained by the authorized Scaffold Inspector. This shall contain:
 - Date of first and subsequent weekly inspections.
 - Individual identifications of all scaffolds which shall be cross-referenced to the Scaffold Tag identity number.
 - Clear name and signature of the authorized Scaffold Inspector against each separate scaffold inspected.



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36.7	No scaffold may be erected which impedes normal access or can be accidentally struck by
	moving plant without prior consultation with OWNER/CONSULTANT to ensure that a safe
	system of work is in place.

- 36.8 Contractors are not permitted to erect or carry scaffolding near live overhead electrical cables, or equipment because of the danger of tubes making accidental contact with electrically charged apparatus.
- 36.9 If there is any doubt about the security of any anchorage, suspension points or ties for a scaffold, e.g., strength of existing buildings/structures, or those under construction, OWNER/CONSULTANT must be consulted before proceeding with erection.
- 36.10 All scaffolds must be provided with suitable access. Where ladders are used for this purpose they must be of adequate length and properly secured by lashing or fixing to prevent displacement.
- 36.11 Action shall be taken to warn personnel against using partly erected or dismantled scaffolds. A prominent "DO NOT USE" sign shall be clearly displayed.
- 36.12 OWNER/CONSULTANT shall approve the sitting of the scaffold material racks/compounds.
- 36.13 Mobile tower scaffolds shall not be constructed with a height greater than 3 times the minimum base width and shall only be used on level ground. Towers shall only be erected by trained personnel.
- 36.14 In addition to weekly inspections, wooden scaffold boards shall be subject to a monthly inspection to ensure wood has not rotted or been subject to insect damage
- 36.15 The Contractor shall ensure that the system of work employed for the erection and dismantling of scaffolding shall not expose the Scaffolders to any risk.
- 36.16 All scaffolding must be erected and dismantled to the requirements laid down in the current regulations and guidance notes and to the requirements of OWNER/CONSULTANT.

37.0 LADDERS/STEPS

- 37.1 Ladders must be in good condition and free from defects, i.e., broken rungs, split stiles.
- 37.2 Ladders must not be painted.
- 37.3 Ladders must:
 - Be securely fastened at the top.
 - Be properly positioned at the base.
 - Extend at least 1m (5 rungs) above the working platform.
 - Be at an angle of 300mm out for every 1.2m vertical drop.
- 37.4 All steps used on the project Site.
- 37.5 Only one person must be allowed on a set of steps at any one time.



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- 37.6 Persons must work with a set of steps of the appropriate height for the task.
- 37.7 The top rung of the steps must be kept at waist height, no work to be carried out above this height on steps.
- 37.8 Ladders are to be used as a means of access not as a working platform except for light, minor or one off activities. Then the person must wear a harness and tie-off to a suitable anchorage whilst carrying out the minor task.

38.0 FALL PROTECTION

- 38.1 Depending on the task and the risks, harnesses and appropriate anchorages/running lines will be used for activities carried out above a height of 2 meters.
- 38.2 Fall protection equipment shall be subject to regular inspection by a competent person, and a register maintained for OWNER/CONSULTANT' inspection.
- 38.3 During the execution of work at height, where it is not practicable to work from within a standard working platform with double handrail and toe boards (for example erection of structural steelwork, installation of roof components, etc), safety netting capable of catching a falling person must be installed as far as reasonably practicable.
- 38.4 The provision of safety netting does not relieve individuals from utilizing fall protection devices during the execution of the works.
- 38.5 The safety nets should be manufactured to Indian Standard and erected in accordance with good practices by a competent person.
- 38.6 The safety nets must bear a label stating the normal size of the net; the date of manufacture, the deflection at the centre of the net during the prescribed test and the maximum distance below the working height for which the net is designed to be used.
- 38.7 Test certificates must be provided for all safety nets, which will state the breaking strength of the net and provide details of the drop test carried out.
- 38.8 All safety nets must be periodically tested at intervals not exceeding three months and records of these tests must be retained.
- 38.9 A formal inspection of safety nets must be carried out weekly to check for damage, loose ties, changes in anchorage points, etc. Records of these inspections must also be retained.

39.0 MOBILE ELEVATED WORK PLATFORMS

- 39.1 The term Mobile Elevated Work Platform (MEWP) covers the following types of equipment:
 - Scissor lifts.
 - Telescopic booms or jibs.
 - Articulating and telescopic booms.



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- 39.2 Anyone who is to operate a MEWP must be competent and have received formal training accredited by manufacturer.
- 39.3 Prior to any MEWP being used on site, a formal risk assessment must be carried out to identify any potential hazards which may exist as a consequence.
- Whilst working within the platform of a MEWP, all personnel must wear a safety harness which is attached to a secure anchorage point within the platform.
- 39.5 Before commencing work from a MEWP, the surrounding area should be cordoned-off to prevent personnel straying into a potentially hazardous area.
- 39.6 The Safe Working Load specified on the MEWP must not be exceeded.
- 39.7 If the MEWP has been manufactured with outriggers or stabilizers, they must always be deployed.
- 39.8 Prior to commencing work, ground conditions must be checked to ensure that the ground bearing capacity will not be exceeded by the loading from the MEWP. Where required, spreader plates shall be used to distribute the loading.
- 39.9 The MEWP shall only be permitted to travel with the platform occupied and/or the boom extended if it is within the machine's specified operational capabilities.
- 39.10 MEWP shall not be used as a jack, prop or support.
- 39.11 MEWP shall not be used as a crane or lifting device.
- 39.12 MEWP shall not be used primarily for the transport of goods or materials.
- 39.13 MEWP shall not be used in wind speed exceeding 30 mph (12.5 m/s).
- 39.14 All MEWPs must be subjected to a regular maintenance and inspection regime, which as a minimum will require weekly inspections by a competent person and a thorough examination every six months.

40.0 CONTRACTORS' TOOLS AND EQUIPMENT

- 40.1 All Contractors' tools and equipment must be fit for purpose. Tools should be CE marked.
- 40.2 Guards and electrical trip switches must work effectively and must not be removed or bypassed.
- 40.3 All tools shall be of good quality and maintained in a safe working condition. Home made tools are not permitted.
- 40.4 The Contractor shall provide suitable storage with suitable racks and bins for storing tools and equipment.



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- 40.5 All temporary construction leads, lighting and portable electric tools shall be of appropriate volts.
- 40.6 The Contractor shall nominate or employ the services of a competent qualified person to inspect and tag electrical power hand tools, transformers, distribution boards, extension cables, etc, on an at least a three monthly basis (PAT testing). The tag shall display name, signature of the individual inspecting the tool and date of inspection.
- 40.7 The Contractor shall keep, on site, a register of all electrical power hand tools in use. The register shall detail:
 - Individual identity number of the tool.
 - Name, signature and company of the qualified electrician carrying out the inspection.
 - Date of inspection.
 - Maintenance and Inspection schedule.
 - Remarks on condition of tool and whether repaired or withdrawn from use.
- 40.8 No electrical powered hand tool shall be used unless it is tagged with a current "INSPECTION" tag.
- 40.9 All electrical leads must be connected to the power source through standard industrial waterproofed plugs and sockets, which shall be in good condition.

41.0 MECHANICAL PLANT AND EQUIPMENT

- 41.1 Mechanical plant and equipment is defined as:
 - Earthmoving plant.
 - Road making plant and equipment.
 - Concrete batching plant and mixers.
 - Forklift trucks.
 - Miscellaneous plant, including generators and compressors.
 - Mobile elevating work platforms (e.g., star- lift, cherry picker, etc).
- 41.2 All items of mechanical plant transported to the project shall be in a safe and sound condition and shall be properly maintained. Emissions shall be to acceptable limits and no smoke shall be discharged.
- 41.3 A programme of regular, preventative maintenance shall be established by the Contractor, as per the manufacturer's handbook, to ensure that all plant equipment is systematically inspected, maintained and repaired as necessary.
- 41.4 The preventative maintenance programme and the Contractor's employee responsible for taking the action shall be clearly detailed, identified and given to OWNER/CONSULTANT.
- 41.5 A safe system of work must exist during all maintenance and repair operations to ensure that no part of the machinery is set in motion while work is being carried out.
- 41.6 Plant maintenance must not be carried out within the main construction site.



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- 41.7 Where refueling is required, facilities provided shall be adequately covered by fire extinguishers, earthing, warning signs, bonding and proper fuel dispensers. Refueling areas shall be curbed to avoid spills.
- 41.8 Waste oil removed from vehicles after servicing shall be sent to the appropriate off-site waste disposal facility and this is the responsibility of the Contractor.
- 41.9 The Client's/OWNER/CONSULTANT' tools, plant and equipment may not be used by Contractors without their express permission.

42.0 COMPETENCY/PLANT EQUIPMENT

- 42.1 All drivers and operators of mobile plant (mechanically propelled vehicles) shall be in possession of the appropriate license for the class of vehicle.
- 42.2 It is the responsibility of the contractor to ensure that all drivers, operators and banks men of mobile plant (mechanically propelled vehicles) are certificated as competent.

42.3 General

- 42.3.1 Every dangerous part of machinery shall be securely guarded.
- 42.3.2 Any guards removed for maintenance or repair purposes must be replaced before the machine is set in motion.
- 42.3.3 No mobile plant (mechanically propelled vehicles) shall carry passengers unless a proper fixed seat is provided, except when the equipment is specifically designed for standing personnel.
- 42.3.4 Mobile plant (mechanically propelled vehicles) must be parked on firm level ground when unattended, the engine stopped, brakes on and any load or attachment lowered to the ground and the keys left in the ignition.
- 42.3.5 No mechanical plant or equipment shall be sited on or operated on any area of the project without express the permission of OWNER/CONSULTANT.
- 42.3.6 All items of mobile plant (mechanically propelled vehicles) shall be fitted with a reverse warning audible alarm.
- 42.3.7 All drivers/operators of mobile plant (mechanically propelled vehicles) shall strictly obey the instructions of the site security, traffic regulations and speed limits. A banks man shall be in attendance during all reversing procedures.

42.4 Inspection

All mobile equipment (mechanically propelled vehicles) shall be inspected by a competent person appointed by the Contractor prior to use on site. Equipment considered to be unsafe, by OWNER/CONSULTANT, shall not be allowed access to the site.

42.5 Flame Arrestors



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42.6 All mobile plant for use in Petro Chemical Live Plant Areas, or during the Start-up and Commissioning Phase of the project, must be fitted with Exhaust Flame Arrestors and Chalwyn Valves where there is a risk of flammable gas releases.

43.0 MACHINERY GUARDING

- 43.1 Unauthorized personnel must not operate, interfere or tamper with plant or equipment.
- 43.2 Persons authorized to use machines must first check that guards are in position and that any other safety devices, e.g., emergency stops, are in working order.
- 43.3 All plant or equipment brought onto the site must be properly guarded to prevent injury and be CE marked.

NO GUARD OR FENCE MAY BE REMOVED FROM MACHINERY.

44.0 WELDING

- 44.1 Welding sets shall be in good condition, properly maintained and earthed.
- 44.2 Isolation switches on welding sets shall be readily accessible.
- 44.3 Terminals and live components shall be adequately protected.
- 44.4 Cables shall be frequently inspected to ensure the insulation is intact.
- 44.5 Damaged cables or electrical holders shall be properly repaired or replaced.
- 44.6 The welding return cable shall be secured onto the work piece. If this is not practical it shall be as near as possible.
- 44.7 Proper cable connectors shall be used when connecting runs of cables.
- 44.8 Welders shall wear:
 - Face and eye protection with correct grade of filter.
 - Welder's gauntlets.
 - Long sleeved flame retardant overalls.

Welders shall wear safety helmets at all times, except whilst welding, when it is agreed as impractical and written permission is granted by OWNER/CONSULTANT, subject to mitigation of hazard, i.e., no work overhead, or shielded from falling objects.

- 44.9 Welding areas should whenever possible be screened off using flame retardant blanket or other suitable material. All combustible materials must be cleared from the vicinity of all welding operations.
- 44.10 Asbestos material shall not be used on the project.
- 44.11 Electric Arc Welding equipment and accessories shall conform to European Standards.



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44.12 Fire extinguishers must be provided and kept adjacent to any welding or cutting activity.

45.0 ABRASIVE WHEELS

- 45.1 Contractors must ensure that any of their employees authorized to change Abrasive Wheels have attended an approved course of training and have been appointed in writing.
- 45.2 Details of each employee trained must be entered in the training register kept on site. Contractors must produce certificates and registers on request.
- 45.3 Machines used to drive Abrasive Wheels must be in good condition and properly guarded.
- 45.4 Pedestal or bench mounted grinders must have an emergency stop button and be fitted with a properly adjusted tool rest and guard.
- 45.5 All hand held grinders shall have a "Dead Man" switch and appropriate guards fitted.
- 45.6 The use of hand held angle grinders over 115mm shall only be permitted for specific tasks, subject to OWNER/CONSULTANTs' approval.

46.0 USE OF GAS AND OXYGEN EQUIPMENT

- 46.1 Compressed gas cylinders shall:
 - Be in good condition and not suffering from corrosion.
 - Be properly colour coded (reference should be made to National Standards).
 - Be individually identified.

Hoses shall be properly colour coded to the internationally recognized standard for the gas being used, in good condition and fitted with hose connectors attached by permanent clips.

Check valves and flashback arrestors must be used on both hoses at all times.

- 46.2 Users shall check the equipment for perished, damaged hoses, regulators, and pressure gauges, etc. Defects must be reported to their supervisors and faulty equipment must be replaced.
- 46.3 When on site, cylinders must be in trolleys or secured in an upright position at all times. A bottle key shall be kept with cylinders in use.
- 46.4 Stored oxygen and fuel gas cylinders shall be kept separate with minimum separation distance of 5m. Cylinders must never be stored or used in a horizontal position cylinders must be secured in an upright position. Empty cylinders must also be separated from full cylinders. Cylinders shall be stored in lockable open mesh bottle cages.
- 46.5 All gas cylinders must be handled with care and they must not be misused or abused. They must be properly shut off when not in use and safety caps must be fitted when being moved.
- 46.6 Great care must be taken to ensure that gas equipment, including hoses, are not allowed to cause obstruction of roadways, walkways, manholes, ladders or other means of access



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where they can cause hazards or be damaged. Hoses not in use should be coiled up and put in a safe place. Hoses should whenever possible be supported off the ground.

- 46.7 Where any operation involves the use of gas and oxygen equipment in enclosed or semienclosed spaces, Contractors' supervision must carry out frequent checks to ensure these procedures are complied with.
- 46.8 During meal breaks and at stopping times, hoses and equipment must be removed from confined spaces or excavations. Oxygen or gas cylinders must not be taken into confined spaces for use or storage.
- 46.9 No modification to tanks or drums which have contained flammable liquid shall be undertaken at the site.

47.0 ABRASIVE AIR BLAST CLEANIN

47.1 Blast cleaning shall be carried out in an enclosed designated area.

Provision shall be made to prevent the spread of grit and dust out of the blast area and to collect and dispose of the spoil to an approved location.

- 47.2 The blast cleaning area shall be indicated by prominent warning signs.
- 47.3 Only approved abrasives having no free silica shall be used.
- 47.4 Personnel involved in the actual blasting of material shall be protected by a positive pressure, blast hood, meeting approved standards and providing both respiratory and eye protection, with breathing air supplied via a suitable filter.
- 47.5 The nozzle shall be fitted with a properly functioning dead man's handle, and anti-static abrasive blast hoses. It is required that all equipment be grounded and checked for ground potential
- 47.6 A standby man shall stay by the blast pot.

48.0 COMPRESSED AIR

- 48.1 All air receivers and compressors shall be in good condition and properly maintained.
- 48.2 Air receivers shall be individually identified and marked with their safe working pressure.
- 48.3 Air receivers shall be accompanied by a valid test certificate which shall be kept on site by the Contractor and shown to OWNER/CONSULTANT before bringing the vessel onto site.
- 48.4 All air receivers must be fitted with a properly set pressure relief valve.
- 48.5 Air receivers shall be examined and the pressure relief valve tested by an independent examiner at yearly intervals.
- 48.6 There shall be a register of all air receivers containing:
 - Individual identification numbers.



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- Dates of independent inspections.
- Name and signature of independent examiner.
- Rates safe working pressure.
- Pressure at which pressure relief valve lifted shall be kept on site by the Contractor along with all current certification.
- 48.7 The requirements inclusive also apply to compressor mounted air receivers.
- 48.8 All compressed air fittings shall be wired and/or restrained to prevent them from whipping should the coupling separate.
- 48.9 Only hose clamps designed for compressed air service shall be used. Worm drive (Jubilee) clips are not acceptable.

COMPRESSED AIR MUST NEVER BE USED FOR CLEANING CLOTHES.

48.10 Nozzles used for air blowing must be fitted with a "Dead Man" valve.

49.0 MOBILE PHONES AND PAGERS

- 49.1 Radios, personal CD and tape players are not allowed in the construction areas.
- 49.2 Mobile phones and pagers are prohibited in the designated construction areas by any hands-on personnel. External to the designated construction areas, providing it does not detract the user from any safety requirements and the user is stationary, then mobile phones and pagers may be used. Other uses of this equipment will be at the discretion of OWNER/CONSULTANT/Client.

50.0 RADIOGRAPHY/NDT

- 50.1 Contractors who carry out radiography/NDT on the site must comply with safe systems of work. In particular, they MUST ensure that:
 - Radiography areas are clearly marked using barrier tapes, notices and flashing lights.
 - Audible warning (horns) must be sounded before a source is exposed.
 - Only Classified Workers are engaged in radiography work.
 - All other personnel are clear of the area before radiography takes place.
 - Radiography work is supervised by a Qualified Radiological Protection Supervisor.
 Such supervisors must be nominated in writing and notified to OWNER/CONSULTANT.
 - Any incident which may have resulted in over-exposure of any personnel is brought to the attention of OWNER/CONSULTANT for investigation.
 - They have a written emergency procedure to be followed in the event of loss of an isotope or damage or malfunction of associated equipment. This procedure must be submitted to OWNER/CONSULTANT for approval before commencement.
 - A certified meter is available on site.
 - Radiography is carried out at the times agreed with OWNER/CONSULTANT, normally this will only be during silent hours. OWNER/CONSULTANT requires twenty-four hours notice of such planned work.
- 50.2 Contractors who are not involved in radiography work must ensure that their employees observe warning notices, alarms and barriers in use where such work is being carried out.



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- 50.3 Contractors must ensure that statutory notification is made to the authorities of radiography works.
- 50.4 Disposal of spent radioactive sources shall be agreed with OWNER/CONSULTANT.

51.0 **WORKING OVER WATER/DIVING OPERATIONS**

51.1 The Contractor shall provide a buoyancy aid to any employee working over (or near) water where there is a likelihood of falling in.

The Contractor shall also supply a sufficient number of life buoys to be permanently located at the point(s) of danger. The life buoys shall be attached to a throwing line.

Where rescue of a person falling into the water may be difficult, OWNER/CONSULTANT may require the Contractor to supply a standby boat, crewed by a competent boatman trained in rescue and resuscitation techniques.

51.2Diving operations may only be carried out using approved specialist diving contractors, employing certified commercial divers, and upon acceptance by OWNER/CONSULTANT of their Health, Safety and Environment plan and method statements (Diving Rules).

52.0 **ASBESTOS**

52.1 Only certified Contractors are allowed to handle asbestos.

53.0 IMPROVEMENT AND PROHIBITION NOTICES

53.1 In the event of an Improvement or Prohibition Notice being served by an Inspector, the OWNER/CONSULTANT Senior Representative must be notified immediately and the Contractor shall comply with the terms of such Notice immediately.

54.0 **CARTRIDGE OPERATED FIXING TOOLS**

The use of Cartridge Operated tools shall only be permitted with the express permission of OWNER/CONSULTANT, subject to an approved method statement and risk assessment, and use only by competent, trained operators).

55.0 SITE ESTABLISHMENT AND AMENITIES

55.1 Details of temporary services to be provided by Contractor.

56.0 **ACCOMMODATION**

- An area will be allocated for temporary site establishment facilities/services. 56.1
- 56.2 When required by the Contract, the Contractor shall provide and maintain (including dewatering when necessary) a suitable level and hardcore surface in the area allocated for temporary buildings such as offices, stores, workshops, mess huts and a stores compound.



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56.3 When required by the Contract, the Contractor shall provide all site offices, stores facilities, workshops and mess huts for the accommodation of staff/site personnel. Proposals for the Contractor's temporary buildings shall be submitted to OWNER/CONSULTANT for approval with their tender.

56.4 Storage in Permanent Buildings

No Plant, Contractor's Equipment or Construction Aids shall be stored in any permanent building without first obtaining the written permission of OWNER/CONSULTANT/Client. Such permission will not relieve the Contractor of the obligation to protect the building from damage whilst used as a store. If permission to use the building is refused by OWNER/CONSULTANT, the Contractor shall provide alternative storage facilities at no additional cost to OWNER/CONSULTANT.

56.5 **Sanitary Facilities**

All toilets and washing facilities shall be provided by the Contractor.

The supply and installation of necessary water sewage/drainage pipe work, pits, etc, for the facilities and the regular emptying and servicing are the responsibility of the Contractor.

56.6 Canteen

The Contractor must provide mess-huts for his employees and arrange any canteen facilities required for his employees and those of any others employed by him in connection with the Work.

57.0 TEMPORARY SERVICES

57.1 Telephone, Facsimile, etc

Arrangements for the provision of telephones, computer modems and/or facsimile facilities shall be made directly with providers of such facilities by the Contractor.

57.2 **Electricity**

If under the contract the Contractor is responsible for providing electricity for the site establishment amenities and working area(s), the Contractor shall ascertain the type, location and available spare capacity of the electrical point(s) of supply and provide cable, connections, isolating switches and earth leakage protection of approved specification.

If the Contractor's requirements for temporary electrical supplies exceed those agreed and render the available service inadequate, the Contractor shall provide the additional requirements at no extra cost to OWNER/CONSULTANT.

Electrical installations including all cables, temporary connections, wandering leads and all electrical facilities and/or equipment required for the execution of the Works shall be properly installed and maintained by the Contractor.

Temporary electrical installations must comply with all appropriate statutory requirements, the latest edition of the Institution of Electrical Engineers Regulations, COP for Distribution of Electricity on Construction and Building Sites and Electrical Safety on Construction Sites.



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Electrical equipment and installation shall at all times be subject to inspection and approval by OWNER/CONSULTANT but this shall not relieve the Installer/User of their responsibilities for the safety of the system.

Electrical equipment or cables forming part of the permanent installation shall not be used by the Contractor for temporary services.

Temporary buildings shall have an external isolating switch.

The Contractor shall supply, install and maintain any temporary workface lighting.

57.3 **Water**

Supply of potable water for drinking and raw water for washing/toilet facilities, mixing concrete, hydrostatic testing and other construction purposes shall be in Contractor's scope. The Contractor shall ascertain the location of the supply point and shall provide and install any temporary pipe work necessary for the provision, use and disposal of such water.

58.0 DISCHARGES INTO THE INTERNAL AND EXTERNAL DRAINAGE SYSTEMS, LAND AND CONSTRUCTION AREAS

- 58.1 All proposed controlled discharges into the site drainage systems shall be agreed with OWNER/CONSULTANT.
- 58.2 Any water discharged on existing roads, hard shoulders or drainage systems shall first pass through a filtering interceptor (which must be regularly cleaned) to prevent the discharge of sludge or solids.
- 58.3 Any damage to the Works caused by prolonged or excessive pumping and any damage or nuisance arising out of pumping operations shall be the liability of the Contractor.
- 58.4 Subsequent to filling with water and testing of any part of the Works for hydraulic testing, the Contractor shall be responsible for safe disposal of the water, and shall ensure that the rate of discharge is controlled and kept within the capabilities of any drainage system utilized.
- 58.5 The Contractor shall provide all requisite equipment and materials to ensure that all drains, rivers, streams or waterways are safeguarded against pollution.

59.0 MAINTENANCE OF ROADS AND DRAINS

- 59.1 Existing roads, road gullies and drains shall be inspected by OWNER/CONSULTANT and the Contractor prior to work commencing. A record of this inspection shall be compiled and on the completion of the Works, a further inspection will be carried out and any necessary repairs to road surfaces or cleaning of drains shall be to the Contractor's cost.
- 59.2 The Contractor shall provide temporary protection to any existing roads to prevent all possibility of damage whatsoever arising from the Works.



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- 59.3 The Contractor shall at all times in the execution of the work maintain all public and site roads in a clean condition to the satisfaction of OWNER/CONSULTANT.
- 59.4 The Contractor shall immediately remove all mud, earth and debris from road surfaces.
- 59.5 Track-laying cranes and similar vehicles must not travel on finished roads without written authority from OWNER/CONSULTANT and then only with the use of timber mats or approved precautions to prevent damage to the roads. Timber mats or other approved precautions shall be supplied by the Contractor.

MATERIALS – STORAGE AND CONTROL 60.0

- The Contractor must give a minimum of twenty-four hours notice of the intention to uplift and 60.1 transport materials/equipment supplied free-issue from OWNER/CONSULTANT/Client' storage facilities to the point of erection or Contractor's storage facility.
- Free-issue materials/equipment furnished by OWNER/CONSULTANT shall be accepted by 60.2 the Contractor and become the responsibility of the Contractor until acceptance of the Works. Any damage caused to free-issue materials after acceptance shall be repaired or replaced by the Contractor to OWNER/CONSULTANT' satisfaction.

60.3 Storage of Petrol, Fuels, Lubricants etc

All fuel and construction materials which may contaminate the site drains, land or watercourses shall be stored in bounded areas. Refueling of plant shall be via bounded bowers. All construction plant in static locations shall have drip trays which shall be cleared dailv.

60.4 **Environmental Impacts**

work, present The Contractor shall, prior to commencement of the OWNER/CONSULTANT/CLIENT for their approval a register of environmental impacts that necessarily arise from their works.

Each identified environmental impact shall be accompanied by an individual Risk Assessment, clearly showing the reduction measures put in place to ensure mitigation of residual risk.

61.0 FOLLOWING SHALL BE APPLICABLE FOR MANDATORY MEDICAL EXAMINATION OF CONTRACTOR WORKERS BEFORE DEPLOYMENT AT WORK SITE:

Medical examination will be in the scope of the contractors.

Medical examination to be conducted by a doctor with minimum MBBS qualification, having registration number for practicing.

Certificate issued should have endorsement on the photo & clearly mention general health/fitness of the candidate to carryout work inside plant, including eye sight, Vertigo, BP, Heart, convulsion problem etc.



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Certificate of fitness is to be issued on letter head of doctor and to be produced with application for photo Gate pass to the E-I-C for the job.

Validity of medical certificate will be for one year from the date of issuance.

Gate pass issued by CISF will bear "Medically Fit" stamp based on the E-I-C's recommendation.



TENDER DOCUMENT FOR DEMOLITION, LAND **DEVELOPMENT & BOUNDARY WALL REPAIR WORKS**

ENVIRONMENT (HSE) MANAGEMENT

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Accordingly, this shall be treated as part of the tender.

MEDICAL CERTIFICATE

Affix latest PHOTO impression of the workmen half covering the photo.

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REV.

Form for Medical Check Up for the Workman engaged by the Contractor				
Certified that I,	have examined ShriAge			
examination as required are given in the enclosed med pathological tests were done in my hosp physical examinations of Shri suffer from any acute / chronic disease or any contagious of	e on the photo in my presence. The details of his dical examination report. I certify that all clinical and ital/dispensary under my instructions. General and do not reveal any abnormality. He does not or infectious disease. He is medically fit to work inside its, general giddiness and height related disease. His			
labour inside the plant. Sign Date:	is physically and mentally fit for undertaking physical			
In my opinion, Shrilabour inside the plant. Sign				

Note: This certificate is to be given on the letterhead of the registered medical practitioner who is possessing MBBS qualification as recognized by the Indian medical council. Below the signature, the

rubber stamp of the medical practitioner should be affixed. The letterhead normally should contain the following:

- 1) Name of the Medical practitioner:
- 2) Qualifications:
- 3) Registration Number:
- 4) Designation:
- 5) Address:



62.0

TENDER DOCUMENT FOR DEMOLITION, LAND DEVELOPMENT & BOUNDARY WALL REPAIR WORKS (PACKAGE-I) AT BARAUNI, BIHAR

HEALTH, SAFETY AND ENVIRONMENT (HSE) MANAGEMENT

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ADDITIONAL SAFETY REQUIREMENT

A. Strict implementation of IS marked safety helmets & IS/CE marked safety shoes for contract personnel

All the contractors working inside the plant shall ensure that their supervisors/labourers compulsorily wear IS marked safety helmets & IS/CE marked safety shoes while entering plant premises. No contract personnel shall be allowed inside battery area without wearing IS marked safety helmets & IS/CE marked safety shoes. All EIC's/site engineers and F&S department shall sensitize and spread awareness among the contract personnel.

Name of Tenderer:	
Signature & Seal of Tenderer:	



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ANNEXURE - I

PDIL'S HEALTH, SAFETY AND ENVIRONMENT (HSE) POLICY

PDIL stands committed to:

- i) Take care of Health, Safety and Environment Regulations & Standards and Code of Practice of the Government / Local Body and the Client in the conduct of the business affairs of the Company. Accordingly, PDIL will strive to inculcate a culture among its employees to comply with all applicable legislation, industry based practices and site requirements in respect of occupational Health, Safety & Environment.
- ii) To prevent the wasteful use of natural resources and minimize any hazardous impact of the development, production, use and disposal of any of its products and services on the ecological environment.
- iii) Design facilities and conduct operations in a way that avoids unacceptable risk to human health, safety and the environment. PDIL will also strive to complete all jobs with no accidents and no harm to people by enforcing preventive safety measures.
- iv) To ensure compliance of HSE Policy in all its divisions, units and construction sites by periodic audit and providing conducive environment to establish continual and sustained improvement of HSE management system of the company. Accordingly, PDIL will provide necessary information, instruction, training and supervision in HSE knowledge and encourage continuous improvement.
- v) To promote the benefits of a healthy life style amongst our employees.

PART - VI



PROJECTS & DEVELOPMENT INDIA LIMITED

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SECTION-B: TECHNICAL

PART-VI

SITE WORKING & SAFETY CONDITIONS

0	11.07.2017	FOR TENDER	SK	KJ	RRK
REV.	DATE	PURPOSE	PREPARED	REVIEWED	APPROVED



SITE WORKING & SAFETY CONDITIONS

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SITE WORKING & SAFETY CONDITIONS

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1.0 SITE LOCATION

The existing Barauni Fertilizer unit of Hindustan Fertilizer Corporation Ltd. (HFCL) is located in the Begusarai district of Bihar. Broad gauge Railway Station (Barauni) is at a distance of 0.8 km from the plant site. The Barauni Refinery of IOCL lies adjacent to the fertilizer plant. The plant is well connected by rail and road. National Highways No. 31 passes nearby. The nearest airport is at Patna about 100 km from Barauni.

2.0 SITE ESTABLISHMENT

- 2.1 The contractor shall provide all huts, stores, tarpaulins and other covers for the accommodation of his staff, workmen and materials. All materials likely to deteriorate in the open shall be stored under suitable cover.
- 2.2 The contractor shall advise the Owner/Consultant within 15 days of the placement of LOI his space requirement which shall include for office, covered storage, open storage, fabrication space, etc. Depending on availability & requirement, space shall be allotted to the contractor for the duration of this contract. He will not be permitted to make use of any other space without the sanction of the Owner. The use of this space shall strictly be made for the execution of this contract only. The sanitary conditions of the ground in or around such structures shall, at all times, be maintained by the contractor in a manner satisfactory to the consultant/owner.
- 2.3 The security of the contractor's equipment and materials is his own responsibility.
- 2.4 The material issued to the contractor by the owner/consultant (if any) will remain under the custody of contractor as a trustee. However, title on the same will remain with the owner. The contractor will be responsible for loss or damage to such materials and shall preserve them in good working condition as required for the contract and good construction practices till such time that they are incorporated in the works and erected, aligned and fully installed in position and handed over to the owner. In case the owner/consultant feels that arrangements made by the contractor are not adequate he shall so advice the contractor and the contractor shall promptly take corrective action. In case the contractor fails to take corrective consultant shall take such corrective actions and recover the cost thereof from the contractor's Bills. Account of such material on completion of work shall be rendered and surplus material returned to the owner as per instructions of owner/consultant.
- 2.5 The contractor shall clear away periodically any rubbish, scrap materials, etc. and dump the same in the area indicated by the owner/consultant. All construction material shall be neatly stacked in an orderly manner as directed by the owner/consultant and care shall be taken to allow proper access to workmen and easy movement of men, vehicles, cranes and materials.



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- 2.6 The contractor shall maintain all the drawings carefully mounted on the board of appropriate size and well protected from the ravages of weather termites and other insects.
- 2.7 The contractor shall not permit the entry to the site of any person not directly connected/concerned with the work without first having obtained the written permission of owner/consultant.
- 2.8 The contractor shall submit a list of plant, equipments, tools, tackles, etc. which he will use, to perform the work. The contractor shall submit a list in duplicate of all materials, tools and tackles etc. brought inside the plant site duly signed by owner's security staff as per the rules laid by owner. These tools, etc. shall not be removed from the site till the completion of job. A gate pass must be obtained from the owner in order to remove from site any plant, machinery, tools, materials and equipment.
- 2.9 All items such as instructions and other pertinent data regarding erection/commissioning and maintenance should be typed and classified for transmittal in a manner approved by the owner/consultant.
- 2.10 All employees of the contractor shall conform to any rules of conduct, etc. established by Failure to also will be sufficient cause for removal of such person from the site.
- 2.11 The contractor will be responsible for providing all plant, tools and tackles, consumables and scaffolding required for the execution of his work as per the best engineering practices.
- 2.12 The receipt, unloading, movement and storage at site of all the contractor's plant, tools and materials is his responsibility. The receipt, movement & storage of material issued by owner/consultant also shall be the responsibility of the contractor.

2.13 **ELECTRICITY**

Construction Power shall be arranged by Contractor at their own cost.

2.14 **CONSTRUCTION WATER**

Construction Water shall be arranged by Contractor at their own cost.

2.15 **FIRST AID**

The Contractor may have access to the Owner's qualified first aid personnel and ambulance, in case of accidents, if available. The contractor will, however provide a first aid post for minor injuries to their staff.

3.0 SUPERVISION OF WORK



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- 3.1 The Contractor shall submit to the Owner/Consultant a resume of his site supervisors for approval prior to commencement of the work. Once approved, the contractor shall not remove his site supervisors without prior concurrence of the Owner/Consultants.
- 3.2 The entire work is to be completed as per the agreed time schedule. The programme of the work in details shall be submitted by the Contractor before commencement of work. The detailed programmes prepared by the contractor shall conform to the targets set forth in the time schedule and will be subject to the approval of the owner/consultant. All the work shall be carried out in such a manner that the work of other agencies at site is not hampered due to any action of the Contractor.

4.0 INSPECTION

The work of the Contractor shall be subject to inspection by the Consultant and/or Owner at all times.

5.0 EMPLOYMENT OF LABOUR

- 5.1 The contractor will be expected to employ on the work only his regular skilled employees with experience of this particular work. The permission of the Owner/Consultant must be obtained before tradesman is recruited locally for the work. This rule does not apply to unskilled labour. No female labour shall be employed in dark hours/ i.e. hours prohibited under the applicable law. No person below the age of eighteen years shall be employed at any point of time.
- 5.2 All traveling expenses including provision of all necessary transport to and from site, lodging allowances and other payments to the contractor's employees are his own responsibility.
- 5.3 The hours of work on the site shall be decided by the Owner/Consultant and contractor shall adhere to the same.
- 5.4 All contractors employees shall wear safety helmet and such identification marks as may be provided by contractor on work site and duly approved by consultant/owners.
- 5.5 All notices displayed on the site and any instructions issued by the Owner/Consultant shall be strictly adhered to by the Contractor's and/or his subcontractors employees.
- 5.6 The Owner may on request of Contractor allocate subject to availability some space to the Contractor for his labour colony. It shall be the responsibility of contractor to provide suitable accommodation including necessary facilities.

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- 5.7 Contractor will arrange for Ration Cards and Permits for labour as per statutory provisions for its labour, as necessary.
- 5.8 The Contractor shall be required to maintain employment records as covered in relevant Acts and produce documentary evidence to the effect that he has discharged his obligations under the Employees Provident Fund Act 1952 for the workmen working at site.
- 5.9 In case the Owner becomes liable to pay any wages or dues to the labour of the Contractor or his sub contractor or any Govt. agency under any of the provision of the Minimum Wages Act, Workmen Compensation Act or any other law due to act of omission of the Contractor, the Owner may make such payment and shall recover the sum from Contractor's bills or any other dues.

6.0 COMPLETION OF WORK

Before finally leaving site, all the Contractors store, huts, plant, tools and rubbish shall be removed and the site left clean and tidy. The space allocated by Owner shall be vacated and handed over to the Owner.

7.0 WORKING AND SAFETY REGULATIONS

- 7.1 The Contractor shall observe all statutory safety and legal requirements regulations issued by Central and State Governments applicable to the work as well as any local regulations applicable to the site issue by the consultant or any other authority.
- 7.2 Particular attention is drawn to the following:
 - i. In case of accident, the Owner/Consultant shall be informed in writing forthwith. The Contractor shall strictly follow regulations laid down by Factory Inspector, Govt. and State authorities in this regard.
 - ii. Contractor shall fence his plant, platforms, excavations etc.
 - iii. Compliance with all electricity regulations.
 - iv. Compliance with statutory requirements for inspection and test of all lifting appliances and auxiliary lifting gear.
- 7.3 Staircase, doors or gangways shall not be obstructed in any way that will interfere with means of access of escape.
- 7.4 No excavations will be started without the permission of the Owner/Consultant, who will inform the Contractor of the position of any pipes or cables known to be buried in the area. All excavations must be effectively railed off at all times, or completely boarded over properly marked during the hours of darkness by red warning lamps, using Flame proof warning lamps in non smoking areas. Debris or material which cannot be immediately removed must be heaped in such a way as to be immediately remove and also to leave adequate passage way. Any finds



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such as relics or antiques coins or fossils etc. shall be promptly handed over to the Owner.

7.5 The contractor will notify the Owner/Consultant of his intention to bring on the site any equipment, such as, space heating or welding apparatus or any container holding liquid or gaseous fuel or other substance which might create a hazard. The Owner/Consultant will have a right to prohibit the use of such equipment or to prescribe the conditions under which such equipment may be used. The consultant will have the right to inspect any construction plant, and to forbid its use if in his opinion it is un-suitable or unsafe. No claim arising there from shall be made by the Contractor.

The contractor or any one acting on his instructions will not bring on to the site any radio active substance or any apparatus using such substances or any X ray apparatus until written permission and direction regarding the use of such equipment has been received from the Consultant/Owner.

- 7.6 The Contractor will meet all requirements, and act on the instructions of the Owner/Consultants where it is necessary to operate a permit to work system.
- 7.7 Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosive, the contractor shall be responsible for carrying out such provision and/or storage in accordance with the rules and regulation laid down in Petroleum Act 1934. Explosive Act 1948 and Petroleum and Carbide of Calcium Manual Published by the Chief Inspector of Explosive of India. All such storage shall have prior approvals of the Consultant. In case any approval or clearance from Explosive or any statutory authorities is required, the contractor shall be responsible for obtaining the same.
- 7.8 The Contractor shall have his own Fire Fighting Extinguishers and Equipment.
- 7.9 The Contractor shall be responsible for the provision of all safety notices safety equipments including the safety gadgets for his workmen required by both the relevant legislation and such as the Owner/Consultant may deem necessary.
- 7.10 While working at heights, safety belts shall necessarily be used.

8.0 ELECTRICAL SAFETY REGULATIONS

- 8.1 In no circumstances will the contractor interfere with fuse and electrical equipment belonging to the owner or other contractors.
- 8.2 Before the contractor connects any electrical appliances to any plug or socket belonging to the other contractor or owner, he will -
 - Satisfy the Owner/Consultant that the appliance is in good working condition.



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- ii. Inform the owner/consultant of the maximum current rating, voltage and phase of appliance.
- iii. Obtain permission of the Owner/Consultant dealing the sockets to which the appliance may be connected.
- 8.3 The Owner/Consultant will not grant permission to plug in until he is satisfied that
 - i. The appliance is in good condition and is fitted with a suitable plug.
 - ii. The appliance is fitted with a suitable cable having two earth conductors, one of which shall be earthed metal sheath surrounding the cores.
- 8.4 No electric cable in use by the other contractor/owner will be distributed without prior permission. No weight of any description be imposed on any such cable and no ladder or similar equipment will rest against or be attached to it.
- 8.5 The voltage for all portable equipment e.g. drilling machines, temporary lighting etc. will not exceed 240 volts.
- 8.6 No work must be carried out on any live equipment. The equipment must be made safe and a "permit to work" issued before any work is carried out.
- 8.7 Contractor shall employ electrician to maintain his temporary electrical installation.

9.0 REPORTING

- a) The contractor must report the following information to the owner/ Consultant in writing daily.
 - Number of men employed, trades-wise,
 - ii) Progress achieved;
 - iii) Concrete pour card, if any.
- b) If during excavation any materials such as but not limited to precious materials or treasure troves etc are found, the same shall be reported to owner immediately and shall be the property of owner.

10.0 SITE REGULATIONS

The Supervisor shall follow site regulations established by Owner. Such site regulations shall include, but shall not be limited to, rules in respect of:

- Al Security and Gate Control
- B] Personal Safety and Safety of Works
- Cl Sanitation and Medical Care
- D] Fire prevention and environment protection
- E] Compliance with all other applicable laws and regulations

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11.0 PRE-REQUISITES FOR ISSUE OF GATE PASSES FOR ENTRY

- A] WC Policy for Personnel [s] deployed for execution of the job valid till the date of completion of job
- B] PF account no. of the individual[s] duly verified by deputing authority on company's Letter Head and confirming due compliance with the provisions of employees Provident Fund Act 1952 and schemes formulated therein.
- C] Two Passport size photographs of the individual[s]
- D] Details of manpower mobilised and Gate pass request on letter head
- E] Medical fitness certificate from qualified Doctor [MBBS]
- F] Safety shoes, Helmet and any other safety appliances required for Safe Execution of job
- G] Labour License in case the number of labourers engaged is 20 or more