Reference No: - MCL/HQ/E&T/14/4927                          Date      10 .11.2014

Sub: Pre-NIT Meet for the "Work of Design, Supply, Installation, Testing , Trial Run and Commissioning with Comprehensive AMC for five years after one year warranty period of an IP Network based CCTV Surveillance System on Turnkey basis at Regional Stores of Bharatpur Area, Hingula Area, Lingaraj Area, Talcher Area, Ib Valley Area, Orient Area, BG Area, Central/Regional Store of Jagannath Area, Lakanpur Area and Central Workshop, Talcher and Central Workshop, Ib Valley of Mahanadi Coalfields Ltd."

MCL intends to invite Tenders for the subject work. The "Draft Tender Document" containing the details of the scope of work, BOQ, Terms & Conditions, Special term & conditions, technical specifications is available in the web site https://mcltenders.gov.in, http://eprocure.gov.in, www.tenders.gov.in and www.mcl.gov.in from where the documents may be downloaded. Interested Bidders may submit their comments/ suggestions against the "Draft Tender Document" online on the MCL e-procurement website https://mcltenders.gov.in after getting themselves enrolled on this portal, free of cost, with their Digital Signature Certificate (DSC) issued from any agency authorized by Controller of Certifying Authority (CCA), Govt. of India and which can be traced up to the chain of trust to the Root Certificate of CCA, upto 01.12.2014. Alternatively in may be submitted in off-line mode so as to reach on or before 01.12.2014 to the HOD(E&T), Mahanadi Coalfields Limited, P.O.- Jagruti Vihar, Burla, Dist: Sambalpur (Odisha),768020.

Interested bidders are requested to attend the above Pre-NIT meeting so that NIT specifications/parameters can be discussed. Bidders who have not submitted their comments/ suggestions may also attend the Pre-NIT meeting.

Subsequent to Pre-NIT Meeting, fresh NIT shall be floated for submission of offer through on-line e-procurement system of MCL on the website https://mcltenders.gov.in. Participation in Pre-NIT Meeting shall not be a criteria to participate in the tender for the subject work.

MCL is no way bound to accept/ include any/all the suggestions/comments offered by the prospective bidders in the Final NIT.

Note : MCL reserves the right to change the scope of work indicated above, which may include installation of the equipment at additional locations including the mines, to add/delete the items in the BOQ and accordingly the value of work may be change, at the time of actual tendering. MCL also reserves the right to change the terms & conditions at the time of actual tendering.

GM(E&M)/HOD(E&T), MCL
NIT No.: MCL/Samb/E&T/e-Tender/14-15/

e-TENDER NOTICE

1. Tenders are invited on-line on the website https://mcltenders.gov.in from the eligible bidders having Digital Signature Certificate (DSC) issued from any agency authorized by Controller of Certifying Authority (CCA), Govt. of India and which can be traced up to the chain of trust to the Root Certificate of CCA, for the following work:

<table>
<thead>
<tr>
<th>Description of work</th>
<th>Estimated Cost of Work (In Rs.)</th>
<th>Earnest Money (In Rs.)</th>
<th>Application fee (In Rs.)</th>
<th>Period of Completion (In Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design, Supply, Installation, Testing, Trial Run and Commissioning with Comprehensive AMC for five years after one year warranty period of an IP Network based CCTV Surveillance System on Turnkey basis at Regional Stores of Bharatpur Area, Hingula Area, Lingaraj Area, Talcher Area, Ib Valley Area, Orient Area, BG Area, Central/Regional Store of Jagannath Area, Lakhanpur Area and Central Workshop, Talcher and Central Workshop, Ib Valley of Mahanadi Coalfields Ltd.</td>
<td>4,30,87,278.00</td>
<td>4,31,000/-</td>
<td>0.00 (Zero)</td>
<td>120</td>
</tr>
</tbody>
</table>

2. Time Schedule of Tender:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Particulars</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Tender e-Publication date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>Document download start date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>Document download end date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>Bid Submission start date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>Bid submission end date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>Start date for seeking Clarification on-line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>Last date for seeking Clarification on-line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h.</td>
<td>Date of Pre-bid Meeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td>Technical Bid Opening date</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. **Deposit of EMD:**

3.1 Earnest Money can be deposited online on e-Procurement portal of MCL by following mode:
   (a). Online fund transfer from Axis Bank
   (b). NEFT from any Scheduled Bank

(EMD through NEFT has to be paid strictly as per the challan generated by the respective bidder on e-procurement portal of MCL. The EMD payment through NEFT mode should be made well ahead of time to ensure that the EMD amount is transferred to MCL account before bid submission).

3.2 In case of online payment of EMD, the bid submission can only be submitted when the EMD is received by MCL.

3.3 In case of online payment of EMD, if the payment is made by the bidder within the last date & time of bid submission but not received by MCL within the specified period due to any reason then the bid will not be accepted. However, the EMD will be refunded back to the bidder.

4. **Pre-bid Meeting**: The pre-bid meeting shall be held in the office of General Manager(E&T), MCL on the scheduled date & time, if specified in the NIT. The purpose of the pre-bid meeting is to clarify the issues and to answer the questions on any matter that may be raised at that stage. Non-attendance at the pre-bid meeting will not be a cause for disqualification of bidder and it shall be presumed that the bidder does not require any clarification. The management shall not circulate proceedings of the pre-bid meeting.

5. **Clarification of Bid**: The bidder may seek clarification on-line within the specified period. However, the management will clarify as far as possible the relevant queries.

6. The bidders have to accept the on-line user portal agreement which contains the acceptance of all the Terms and Conditions of NIT and tender document, undertakings and the e-Procurement system through [https://mcltenders.gov.in](https://mcltenders.gov.in) in order to become an eligible bidder. This will be a part of the agreement.

7. **Eligible Bidders**: The invitation for bid is open to all bidders including an individual, proprietorship firm, partnership firm, company or a Joint Venture having eligibility to participate as per eligibility criteria stipulated in clause No.8 of NIT and having Digital Signature Certificate (DSC) issued from any agency authorized by Controller of Certifying Authority (CCA), Govt. of India and which can be traced up to the chain of trust to the Root Certificate of CCA.

Note: Joint Venture: Two or three companies/contractors may participate in the tender as Joint Venture(JV). Joint Ventures must comply the following requirements:

i). The minimum qualification requirements for Joint Ventures: The qualifying criteria parameters e.g. experience, financial resources etc. of the individual partners of the J.V. will be added together and the total criteria should not be less than as spell out in qualification criteria.

ii). The formation of Joint Venture or change in the Joint Venture character/partners after submission of the bid and any change in the bidding regarding Joint Venture will not be permitted.

iii). Joint Venture Agreement should legally bind all partners jointly and severally.

iv). The pre-qualification of a joint venture does not necessarily pre-qualify any of its partners individually or as a partner in any other joint venture or association. In case of dissolution of a joint venture, each one of the constituent firms may pre-qualify if they meet all the pre-qualification requirements, subject to written approval of the employer.
v). The JV Agreement must include the relationship between joint venture partners in the form of JV Agreement to legally bind all partners jointly and severally for the proposed agreement which should set out the principles for the constitution, operation, responsibilities regarding work and financial arrangements, participation (percentage share in the total) and liabilities (joint and several) in respect of each and all of the firms in the joint venture. Such JV Agreement must evidence the commitment of the parties to bid for the facilities applied for (if pre-qualified) and to execute the contract for the facilities if their bid is successful.

vi). One of the partners responsible for performing a key component of the contract shall be designated as Lead Partner. This authorization shall be evidenced by a Power of Attorney signed by legally authorized signatories of all the partners.

vii). The JV Agreement must provide that the Lead Partner shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the Joint Venture and the entire execution of the contract shall be done with active participation of the Lead Partner.

viii). The contract agreement should be signed jointly by each Joint Venture Partners.

ix). An entity can be a partner in only one Joint Venture. Bid submitted by Joint Ventures including the same entity as partner will be rejected.

x). The J.V. agreement may specify the share of each individual partner for the purpose of execution of this contract. This is required only for the sole purpose of apportioning the value of the contract to that extent to individual partner for subsequent submission in other bids if he intends to do so for the purpose of the qualification in that tender.

8. **Eligibility Criteria**

A. **Work Experience**: The intending tenderer must have in its name as a prime contractor experience of having successfully completed similar works in any Government/Semi-Government/Public Sector Undertakings (Central/State)/Private firm (only if the Private firm is a Company registered under Indian Companies Act’1956) during last 7 (seven) years ending last day of month previous to the one in which bid applications are invited (i.e. eligibility period) should be either of the following:-

- Three similar completed works each costing not less than the amount equal to 40% of the estimated cost.
- Two similar completed works each costing not less than the amount equal to 50% of the estimated cost.
- One similar completed work costing not less than the amount equal to 80% of the estimated cost.

(In case the bidder is not a prime contractor but a sub-contractor, the bidder’s experience as sub-contractor will be taken into account if the contract in support of qualification is a sub-contract in compliance with the provision of such sub-contract in the original contract awarded to prime contractor.)

The work experience of the bidder for those works only shall be considered for evaluation purposes, which are completed on or before the last day of month previous to one in which e-Tender has been invited (i.e. e-Publication date of NIT). The experience of incomplete/ongoing works as on the last date of eligibility period will not be considered for evaluation.
While considering the value of completed works, the full value of completed works will be considered whether or not the date of commencement is within the said 7 (seven) years period.

The cost of completed works shall be given a weightage to bring them at current price level by adding 5% for each completed year (total number of days/365) after the end date of experience (date of completion of work) till one year before the last day of month previous to one in which e-Tender has been invited.

**The definition of Similar work shall be as follows:**

**“ANY CCTV WORK”**

In respect of the above eligibility criteria the bidders are required to furnish the following information on-line:

i). Start date & end date of each qualifying experience (similar work)

ii). Agreement Number/Work Order Number of each experience

iii). Work Order Issuing authority of each experience

iv). Percentage (%) share of each experience (100% in case of an individual/proprietorship firm or a partner in a partnership firm and the actual % of share in case of a Joint Venture)

v). Executed Value of work against each experience

vi). Confirmation in the form of Yes/No regarding submission of similar work experience as defined in the NIT.

Note: In case the bidder is a Joint Venture, the work experience of any one, two or three of the individual partners of JV may be furnished as the work experience of the bidder.

B. **Financial Turnover**: Average annual financial turnover during the last 3 (three) years ending 31st March of the previous financial year should be at least 30% of the estimated cost.

(The “Previous Financial Year” shall be computed with respect to the e-Publication date of NIT).

If any bidder does not furnish the turnover value for any financial year out of the last 3 financial years, the turnover for that financial year shall be taken as ‘Zero’ and the average annual financial turnover shall be calculated accordingly.

Financial turnover shall be given a weightage to bring them at current price level by adding 5% in the financial turnover for the 2nd year and 10% for the 3rd year. No weightage will be given in the turnover for the 1st year.

In respect of the above eligibility criteria the bidders are required to furnish the following information on-line:

i). Annual financial turnover of each of the last 3 years ending 31st March of the previous financial year.

ii). Name of the Chartered Accountant issuing the Profit and Loss A/c or the Turnover certificate

iii). Membership Number of the Chartered Accountant

iv). Date of issue of financial turnover certificate by CA

Note: In case the bidder is a Joint Venture, the turnover of the individual partners of the JV will be added together for each financial year and is to be furnished as the turnover of the bidder for that particular financial year. However, the information against Sl.No.(ii), (iii) & (iv) above will be given w.r.t. the lead partner of JV only.
C. **Permanent Account Number (PAN)**: The bidder should possess Permanent Account Number (PAN) issued by Income Tax department, Govt. of India.

In respect of the above eligibility criteria the bidders are required to furnish the following information on-line:

i) Confirmation regarding possessing of Permanent Account Number (PAN) issued by Income Tax department, Govt. of India in the form of Yes / No.

Note: In case the bidder is a Joint Venture, each individual partner of JV should possess Permanent Account Number (PAN) issued by Income Tax Department, Govt. of India.

D. **VAT/Sales Tax Registration on Works Contract**: The bidder should possess a VAT/Sales Tax Registration on works contract issued by Sales Tax department of any Indian State.

In respect of the above eligibility criteria the bidders are required to furnish the following information on-line:

i) Confirmation regarding possessing of VAT/Sales Tax Registration on Works Contract issued by Sales Tax department of any Indian State in the form of Yes / No.

Note: In case the bidder is a Joint Venture, each individual partner of JV should possess a VAT/Sales Tax Registration on works contract issued by Sales Tax Department of any Indian State.

E. **Bid Capacity**: The system of determination of bid assessment capacity as given below will be used only in case of works of estimated value of Rs.1.00 Crore and above.

Bidders who meet the minimum qualifications criteria will be qualified only if their available bid capacity is more than the tendered value (estimated cost) of the work. The available bid capacity will be calculated as under:

\[
\text{Assessed Available Bid Capacity} = (A \times N \times 2 - B)
\]

where,

- **A** = Maximum Financial Turnover in any one financial year during the last five financial years ending 31\textsuperscript{st} March of the previous financial year (updated to present level @ 5% per year) with respect to the date of NIT/e-publishing date.
- **N** = Number of years (Completion period in days/365), prescribed for completion of the works for which bids are invited.
- **B** = Value at present price level, of existing commitments and ongoing works to be completed during the period of completion of work for which bid is invited.

If any bidder does not furnish the turnover value for any financial year out of the last 5 financial years, the turnover for that financial year shall be taken as ‘Zero’ and the maximum annual financial turnover shall be calculated accordingly.

Financial turnover shall be given a weightage to bring them at current price level by adding 5\% in the financial turnover for the 2\textsuperscript{nd} year, 10\% for the 3\textsuperscript{rd} year, 15\% for the 4\textsuperscript{th} year & 20\% for the 5\textsuperscript{th} year. No weightage will be given in the turnover for the 1\textsuperscript{st} year.

In respect of the above eligibility criteria the bidders are required to furnish the following information on-line:

i) Annual financial turnover of each of the last 5 years ending 31\textsuperscript{st} March of the previous financial year.

ii) Name of the Chartered Accountant issuing the Profit and Loss A/c or the Turnover certificate.

iii) Membership Number of the Chartered Accountant (CA)
iv). Date of issue of financial turnover certificate by Chartered Accountant (CA)

v). Value at present price level, of existing commitments and ongoing works to be completed during the period of completion of work for which bid is invited i.e. “B”.

Note: In case the bidder is a Joint Venture, the turnover of the individual partners of the JV will be added together for each financial year and is to be furnished as the turnover of the bidder for that particular financial year. In case of Sl.No.(v), the value of existing commitments of each individual partner of JV shall be added together and to be furnished as the value of “B” for the bidder. However, the information against Sl.No.(ii), (iii) & (iv) above will be given w.r.to the lead partner of JV only.

F. Service Tax Status of Bidder

The bidder should be either a Small Service Provider and exempted for service tax registration and/or payment of service tax

OR

A Body Corporate

OR

Other than above two categories

In respect of the above eligibility criteria the bidder is required to furnish the following information online:

Confirmation regarding possessing the required document as enlisted in Clause No.15(6) of NIT to confirm that the bidder is either a Small Service Provider and exempted for Service Tax registration and/or payment of Service Tax OR a Body Corporate OR Other than above two categories.

NOTE: - In case the bidder is a joint venture, each individual partner of JV should possess the required document as enlisted in clause no.15(6) of the NIT to confirm that the bidder is either a Small Service Provider and exempted for Service Tax registration and/or payment of Service Tax OR a Body Corporate OR Other than above two categories.

G. Compliance on Special Terms & Conditions:

In respect of above eligibility criteria the bidders are required to furnish the following information on line in the form of Yes/No

(i)

(a) Confirmation regarding valid ISO 9001 and ISO 14001 certification of the OEMs of Cameras (including Video Management Software/s), and Network/LAN Switches.

(b) Confirmation regarding the OEM is in the respective business with same products (Cameras/Network(LAN) Switches) as OEM, for at least last three years.

(c) Confirmation that the OEMs of Cameras and Network/LAN Switches have Sales and Service Centre in India for at least last two Years with Technical Support and that they also have RMA support (or, similar support) in India for the respective Items.

(d) Confirmation regarding the OEM of Cameras that the Cameras offered are UL listed/EN, FCC Certified/CE certified and the Cameras are suitable for surveillance in Industrial Environment.

(e) Confirmation regarding authorization issued from OEM/OEMs of camera, switches, server and NAS for participating in this specific tender, which includes authorization issued from the OEM/OEMs with the commitment by the manufacturer(s) confirming minimum six year (one year warranty and five year AMC) support of the system offered and shall guarantee supply of spares & service for the equipment for the service life starting from the date of acceptance and also confirmation issued by the OEM/OEMs of the above equipment that the models offered comply to the technical specifications for the respective items as per NIT in the format “Technical Compliance Sheet” enclosed.

Note: In case the bidder is a Joint Venture, the Authorisation may be in favour of any of the partners of JV.
(ii)
a) Confirmation regarding ISO 9001 :2008 (or higher) certification of QMS of the bidder
b) Confirmation regarding submission of affidavit on being L1, as per Cl. 15 Sl.No.9 below.

9. **Submission of Bid:**
   a. In order to submit the Bid, the bidders have to get themselves registered online on the e-Procurement portal of MCL (https://mcltenders.gov.in) with valid Digital Signature Certificate (DSC) issued from any agency authorized by Controller of Certifying Authority (CCA), Govt. of India and which can be traced up to the chain of trust to the Root Certificate of CCA. The online Registration of the Bidders on the portal will be free of cost and one time activity only. The registration should be in the name of bidder, whereas DSC holder may be either bidder himself or his duly authorized person.

   b. The bidders have to accept unconditionally the online user portal agreement which contains the acceptance of all the Terms and Conditions of NIT including General and Special Terms & Conditions and other conditions, if any, along with on-line undertaking in support of the authenticity of the declarations regarding the facts, figures, information and documents furnished by the Bidder on-line in order to become an eligible bidder. No conditional bid shall be accepted.

   c. **Letter of Bid:** The format of Letter of Bid (as given in the NIT) will be downloaded by the bidder and will be printed on Bidder's letter head and the scanned copy of the same will be uploaded during bid submission in cover-I. This will be the covering letter of the bidder for his submitted bid. The content of the “Letter of Bid” uploaded by the bidder must be the same as per the format downloaded from website and it should not contain any other information.

   The Letter of bid will be digitally signed by DSC holder submitting bid online and it does not require any physical signature. However, if the Letter of Bid(LoB) bears the physical signature in addition to the digital signature of DSC holder, it will be accepted without questioning the identity of person signing the Letter of Bid.

   If there is any change in the contents of Letter of Bid uploaded by bidder as compared to the format of Letter of Bid uploaded by the department with NIT document, then the bid will be rejected.
d. Price bid: (i) The Price Bid/BOQ comprises 02 sheets (i.e. BOQ Sheet and Sheet for Bidder, ) in Excel Format one of the sheet is for Bidders & the other sheet is the calculation sheet. The sheet named as “Sheet for Bidder” is for Bidders.

The calculation sheet (BOQ Sheet) shall remain protected and no bidder can enter any data in this sheet. However, the bidder can view this sheet to check their final figure of their bid.

The Bidder shall fill only the “Sheet for Bidders”. All the columns have to be filled as per the requirement of the format i.e. in percentage or absolute value.

(ii) In case the tendered item is eligible for CENVAT CREDIT then the L-1 status shall be decided by deducting the following price components from the landed price viz Excise Duty, Service Tax (if applicable), Education Cess from the landed value. Incase of imported materials Counter Vailing Duty, Custom Cess & Special Additional Duty paid by them during import shall be deduced from the Landed value to decide the L1 Status.

(iii) Bidders are to indicate their Central Excise Registration no. on the designated cells of the “Sheet for Bidders”. In case any of bidders fails to mention above details their offer shall not be considered for further evaluation.

(vi) As entry tax is applicable for all bidders @ 2% (rate presently applicable), this component will be taken into consideration by the system for calculating the landed price for all the bidders. The bidders from the state of Odisha should not include Entry Tax Component in their Basic Price.

The landed price in INR will be calculated automatically by the system in the Excel Sheet. Thereafter, the bidder will upload the same Excel file during bid submission in cover-II. The Price-bids of the bidders will have no condition. The Price Bid which is not submitted as per instruction given above will be rejected.

The Bidder will have to quote for all the tendered items as the job is to be carried out on turnkey basis. Failing to quote against any items will disqualify the bid. The evaluation of prices to arrive L-1 status will be made on FOR Destination basis for all the items put together, all inclusive along with NPV of AMC charges for 5 years.

All bids are to be submitted on-line on the website https://mcltenders.gov.in. No bid shall be accepted off-line.

PRICES:

Prices quoted must be FIRM till delivery; otherwise the offer will be rejected.
The destination point for delivery of materials will be as follows:

**ADDRESSES OF THE DIFFERENT SITES/LOCATIONS:**

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central /Regional Store, MAHANADI COALFIELDS LTD, Lakhanpur Area. PO: Bandhabahal, Belpahar Dist. Jharsuguda-768211, ODISHA</td>
</tr>
<tr>
<td>2</td>
<td>Regional Stores, MAHANADI COALFIELDS LTD, Orient Area, P.O.: Orient Colliery, Dist: Jharsuguda-768233, (Odisha)</td>
</tr>
<tr>
<td>4</td>
<td>Central workshop (EXCV), IB Valley, MAHANADI COALFIELDS LTD, Bandhabahal. Dist: Jharsuguda-768211, ODISHA</td>
</tr>
<tr>
<td>5</td>
<td>Regional Stores, MAHANADI COALFIELDS LTD, Basundhara-Garjanbahal Area, Post : BASUNDHARA–770076, Dist. Sundargarh (Odisha)</td>
</tr>
<tr>
<td>6</td>
<td>CENTRAL WORKSHOP(X), TALCHER, MAHANADI COALFIELDS LTD, PO- BALANDA, DIST- ANGUL, PIN CODE- 759 116 (ORISSA)</td>
</tr>
<tr>
<td>7</td>
<td>Central Regional Stores, MAHANADI COALFIELDS LTD, Jagannath Area Po.: Balanda, Talcher, Dist. Angul-759116</td>
</tr>
<tr>
<td>8</td>
<td>Regional Store, MAHANADI COALFIELDS LTD, Talcher Area, At/PO- Dera, Dist- Angul, Odisha - 759103</td>
</tr>
<tr>
<td>9</td>
<td>Regional Stores, MAHANADI COALFIELDS LTD, Hingula Area, PO-Gopal Prasad: Via-Talchar,Dist- Angul(Odisha) PIN - 759103</td>
</tr>
<tr>
<td>10</td>
<td>REGIONAL STORES, MAHANADI COALFIELDS LTD, LINGARAJ AREA PO. DEULBERA COLLIERY, TALCHER, DIST. ANGUL - 759102 (Odisha)</td>
</tr>
<tr>
<td>11</td>
<td>REGIONAL STORES, MAHANADI COALFIELDS LTD, BHARATPUR AREA, NEAR BHARAPUR CHP,P.O. N.S.NAGAR, BHARATPUR, VIA-TALCHER, DISTT. ANGUL (ODISHA)- 759148</td>
</tr>
</tbody>
</table>

Details of Location wise allocation of items are indicated in the enclosed "Bill of Quantity”

The bidder will be responsible for safe arrival of materials to the destination points as
mentioned above. However, the unloading and stacking of materials will be the responsibility of the contractor.

The bidders should quote their unit rate on FOR (Free on Road/Rail) destination basis in a specified format containing the breakup of applicable taxes and duties, freight, insurance as per the requirement of BOQ (Sheet for Bidder) i.e. in percentage or absolute value. Entry tax component shall automatically be calculated by the system for calculation of Landed price. The presently applicable rate is @ 2 %. Bidders from with-in the state of Odisha should quote their basic price exclusive of entry tax and other components of the price in percentage or absolute value along with the basic price of each item. The landed value will be calculated automatically by the system based on the price quoted by the bidders, by summing up the basic rate with other price elements as given by bidders online and L1 bidder shall be decided by the system. However the items for which MCL is eligible for availing CENVAT Credit the system shall deduct the following Price elements (i.e. Excise duty, Service tax, Counter Vailing Duty and, Education Cess) from the landed Value for arriving at the L1 Status

Excise Duty: Bidders are required to indicate Excise Duty and Service Tax separately in the BOQ wherever applicable.

In case MCL is eligible for CENVAT Credit, at the time of evaluation of tenders to arrive the lowest landed rate quoted, the amount of Excise Duty and Service Tax including education Cess will be deducted from the landed cost for evaluation of tender and for deciding the L1 status.

Bidders are to indicate their Central Excise Registration no. on the designated cells of the “Sheet for Bidders”. If the Bidder is exempted from paying Excise Duty, they have to mention as “NOT APPLICABLE” in the space of Central Excise Registration number in the “Sheet for Bidders” [Under Price Bid / BOQ]. In case they become Successful Bidder, they will have to submit Excise exemption document.

All bidders including first stage & second stage dealers shall be required to take Excise Registration and submit cenvatable invoice for excisable goods unless the bidder is exempted from doing so as per relevant provision of excise notification. Firms claiming exemption from taking Excise registration shall submit documentary evidence to this effect as per relevant provision of Rule 9(2) of Excise Rule 2002. Failing in compliance to this, the offers are liable for rejection. Successful Bidder / Bidders are required to upload the documents enlisted in Clause 15 to the above effect.

Countervailing duty (CVD) & Special Additional Duty (SAD) on imported items: (Indian selling agent, dealer, distributor) In case MCL is eligible for CENVAT Credit, at the time of evaluation of tenders to arrive the lowest landed rate quoted, the amount of countervailing duty (CVD), Custom Cess and Special Additional duty (SAD) will be deducted from the landed cost for evaluation of tender and for deciding the L1 status. The difference between the value of CVD declared in the price bid and the value of the CVD in the import document submitted will be recovered from the bills of the contractor, in case the value of CVD in the import documents is less than the value of CVD quoted in the price bid.

Taxes and Duties: In case of any increase in Taxes and Duties after the last date of submission of bid and up to the stipulated delivery period, the same shall be reimbursed by the Company on production of documentary evidence in support of payment actually
made to the concerned authorities. In case of any increase in Taxes and Duties after expiry of the stipulated delivery period, such increase will be borne by the Supplier. In case of any decrease in Taxes and Duties after the last date of submission of bid and up to the delivery period (stipulated/extended), the same shall be recovered from the Supplier.

**Rate of Service tax**, if applicable, shall be mentioned separately, and shall be reimbursed as per the existing rules during the contract period with declaration stating that the same has not been claimed anywhere else.

**Applicable Rate of Entry Tax:** The applicable rate of Entry tax for the tendered items will be @ 2% (rate presently applicable) on the total price including all taxes and Duties.

**Note:** In respect of supplies from the states other than Odisha, Entry Tax will be paid by MCL but for the supplies from within the state of Odisha the Entry Tax will be paid initially by the bidder, which will be reimbursed by MCL.

Entry tax component shall automatically be calculated by the system for calculation of Landed price. The rate presently applicable is @ 2%. Bidders from within the state of Odisha should quote their basic price exclusive of entry tax.

**Applicability of CST:**
Concessional CST is applicable for the tendered items and form “C” will be issued by MCL to the Supplier and NIL for direct import supplies.

**OR**

Full CST will be applicable for the tendered items and form “C” will not be issued by MCL to the Supplier and NIL for direct import supplies.

*(Delete whichever is not applicable)*

**Odisha Value Added Tax (OVAT Act) / Central Sales Tax (CST Act)**

At the time of payment to the contractor, the Company (Mahanadi Coalfields Ltd.) shall deduct OVAT at the prevalent rate of 4% from the gross amount of the bill (Section 54 (1) of OVAT Act).

However, if the contractor produces a certificate from his jurisdictional Sales Tax Authority for no deduction of tax / deduction at reduced rate, the same shall be complied with by the Company (Section 54(5) of OVAT Act).

However further that the Company shall not deduct any tax on the value of any property in goods transferred in the course of Inter-State Sales, Sales outside the State or Sales in the course of import as per Explanation to subsection 6 of Sec 54 of OVAT Act.
Non-deduction of VAT @ 4% is applicable only for the value of the property in goods transferred as explained in the previous paragraph. But (i) on the value of the property in goods transferred by other means (e.g., purchase within Odisha) and (ii) on other portions of the value of work (e.g., labour, service), VAT at the prevalent rate of 4% shall be recovered. However, no deduction / deduction at reduced rate of VAT shall be made by the Company on (i) and (ii), in the event the contractor produces certificate in Form 606 issued by contractor's jurisdictional Sales Tax authority under Section 54(5)(a) of the OVAT Act; in the absence of such a certificate, VAT @ 4% shall be recovered by the Company.

(d) Since the contractor has to be a registered dealer under OVAT Act, he can obtain statutory forms such as Way Bill / Declaration Form-C from the competent sales tax authorities himself and utilize the same for the work. In case the contractor sells goods in transit (E-1 Sales), no further CST would be charged by the contractor on sales made to the Company. Form C shall be issued by the Company to the contractor to enable him claim exemption from further payment of CST under Section 6(2) of the CST Act.

**Orissa Entry Tax (OET)**

The contractor shall issue his own Way Bill and the liability to pay Odisha Entry Tax lies with him.

**Service Tax**

As per Section 65(105) (zzzza) of the Finance Act, the turnkey contract falls under "works contract" and is a taxable service. If the service provider is an Individual, HUF, Partnership firm or an Association of persons, the service provider will be liable to pay service tax on 50% of the value of the service and the balance will be deposited by MCL. In other cases the entire amount of service tax will be the liability of the service provider.

In case of divisible contracts (where values for supply of materials and services respectively are given separately), service tax is chargeable on service portion of the value of the contract at the present rate of 12.36%.

(Rule 2A(i)):

In this method, the value of the service portion of the works contract shall be equivalent to (a) gross amount of the work less (b) value of the transfer of property in goods involved in the execution of the work. That is, (a) – (b). Service tax is leviable on this value at the present rate of 12.36%.

Where VAT has been paid on the actual value of transfer of property involved in the execution of the works contract, then, such value adopted for the purposes of payment of sales tax/VAT shall be taken as the value of property transferred in the execution of the works contract for determining the value of the service portion.

**Liability to pay service tax:**

The recipient of service (MCL) is liable to pay service tax on 50% of the value of service if the service provider is an individual, HUF, Partnership or an Association of Persons; the service provider is liable to pay service tax on the remaining value of the service. On the other hand, if the service provider is a body corporate (Company), then it is the service provider that has to pay the entire service tax and MCL is not liable to pay any service tax.
Evaluation of L1:

In view of above, for evaluation of lowest quoted rate, the amount of service tax payable by MCL in case of non-corporate bidders will be added to their quoted value of work.

Secondly, though the rate quoted by the bidders is inclusive of all taxes, the bidder shall disclose the taxes & duties separately, which has been considered in the price bid. In case, MCL is liable to pay service tax, under the reverse charge mechanism, the bidder shall also indicate the same separately.

Income Tax

The Company shall deduct Income Tax as per prevalent rate from time to time from the gross amount of the bill payable to the contractor; at present the rate of deduction is 2%. However, if the contractor produces a certificate from the Income Tax authorities for no deduction of tax / deduction of tax at reduced rate, the same shall be complied with by the Company.

Documents

The contractor, along with his bills, shall submit proper documents in the name of the Company to enable the Company claim Input Tax Credit / Cenvat Credit under the applicable laws. These documents are as follows:

(i) For supply of taxable goods within Odisha: Tax Invoice under Section 62 of OVAT Act to be supplied by the contractor. Such Tax Invoice shall contain the particulars as required under Rule 68(1) of the OVAT Rules.

(ii) For the supply of indigenous excisable goods: "Duplicate for Transporter" copy of the Excise Invoice issued under Rule 11 of the Central Excise Rules, 2002. The said invoice must necessarily mention ‘Consignee’ as Mahanadi Coalfields Ltd (addressed at the respective Area) and contain all the particulars required to be mentioned as per the said Rules. In case the goods are sourced from a third party (including a manufacturer or dealer), the same should be delivered under cover of proper Central Excise Invoice issued by the third party mentioning Mahanadi Coalfields Ltd (addressed at the respective Area) as Consignee.

(iii) For supply of imported goods: In case the goods are imported from outside India directly by the contractor or through sub-supplier or foreign manufacturer's agent or any other person, proper excise invoice shall be issued, as applicable mentioning Mahanadi Coalfields Ltd (addressed at the respective Area) as 'Consignee' to pass on the Cenvat Credit of Countervailing Duty (CVD) in lieu of Excise Duty and Special Additional Duty (SAD) in lieu of Sales tax, registered with the jurisdictional Excise authorities as Manufacturer's Depot / First Stage Dealer / Second Stage Dealer.

(iv) For provision of taxable services: Invoice under Rule 4A of the Finance Act, 1994. The said invoice shall necessarily contain all the particulars required to be mentioned as per the said Rules, such as name of Service Provider, Address, Service Tax Registration No., Break up of service tax, cess with rates etc.

10. All bids are to be submitted on-line on the website https://mcltenders.gov.in. No bid shall be accepted off-line.
11. It is the bidder’s responsibility to comply with the system requirement i.e. hardware, software and internet connectivity at bidder’s premises to access the e-tender website. Under any circumstances, MCL shall not be liable to the bidders for any direct/indirect loss or damages incurred by them arising out of incorrect use of the e-tender system or internet connectivity failures.

12. After receipt of EMD as stated in clause No.3, the Technical-bid will be decrypted and opened online, on the scheduled date and after the pre-scheduled time by the Bid Openers with their Digital Signature Certificate(DSC). The bidders can view bid opening remotely on their personalized dash board under “Bid Opening(Live)” link. Thereafter, the Technical-bid shall be evaluated by the system on-line based on the information furnished by bidders on-line in accordance with clause No.8 (Eligibility Criteria). This on-line evaluation will be validated by MCL.

13. After evaluation of Technical-bid, all the bidders will get the information regarding their eligibility on website. Thereafter, a system generated e-mail confirmation will be sent to all successful bidders communicating the date and time of opening of Price-bid.

14. The Price-bid of the successful bidders (qualified in Technical-bid) will be decrypted and opened online, on the scheduled date and after the pre-scheduled time by the Bid Openers with their Digital Signature Certificate (DSC). The bidders can view bid opening remotely on their personalized dash board under “Bid Opening(Live)” link. The bidders will get the information regarding the status of their financial bid and ranking of bidders on website.

15. After opening of Price-bid, the list of documents required to be submitted by L-1 bidder as enlisted in the NIT will be specified on-line by Evaluator indicating the start date and end date allowing 7 days (7 x 24 hours) time for on-line submission by bidder. The L-1 bidder will get this information on their personalized dash board under “Upload confirmatory document” link. Additionally, information shall also be sent by system generated e-mail and SMS, but it will be the bidder’s responsibility to check the updated status/information on their personalized dash board at least once daily after opening of Price-bid. No separate communication will be required in this regard. Non-receipt of e-mail and SMS will not be accepted as a reason of non-submission of documents in support of the information/declarations furnished by them on-line within the specified period of 7 days. However, the affidavit may be scanned and uploaded as it is, without any additional self certification and attestation by Notary public.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Eligibility Criteria</th>
<th>Document Details</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>Work Experience (Ref. Clause No.8(A) of NIT)</td>
<td>Satisfactory Work Completion Certificate issued by the employer against the experience of similar work containing all the information furnished by bidder on-line.</td>
</tr>
<tr>
<td>2.</td>
<td>Financial Turnover (Ref. Clause No.8(B) of NIT)</td>
<td>Financial Turnover certificate for last 3 (three) financial years issued by a Practicing Chartered Accountant having a membership number with Institute of Chartered Accountants of India. (In case of JV, turnover certificate for each individual partner of JV)</td>
</tr>
<tr>
<td>3.</td>
<td>Permanent Account Number (Ref. Clause No.8(C) of NIT)</td>
<td>PAN card issued by Income Tax department, Govt.of India (In case of JV, PAN card for each individual partner of JV)</td>
</tr>
</tbody>
</table>
4. **VAT/Sales Tax Registration on Works Contract**
   *(Ref. Clause No.8(D) of NIT)*
   - VAT/Sales Tax Registration Certificate on works contract from any Indian State
     *(In case of JV, VAT/S.T. Registration certificate for each individual partner of JV)*

5. **All Bidders including first stage & second stage dealers shall be required to take Excise Registration and submit cenvatable invoice for excisable goods unless the bidder is exempted from doing so as per relevant provision of excise notification**
   *(Ref. Clause No.9(d) of NIT)*
   - Any one of the following documents (self authenticated and attested by Notary Public):
     1. Excise Registration Certificate.
     2. Firms claiming exemption from taking Excise Registration shall upload documentary evidence to this effect as per relevant provision of Rule 9(2) of Excise Rule 2002.

6. **Bid Capacity**
   *(for tendered value of Rs.1.00 Crore and above)*
   *(Ref. Clause No.8(E) of NIT)*
   - Financial Turnover certificate for last 5 (five) financial years issued by a Practicing Chartered Accountant having a membership number with Institute of Chartered Accountants of India.
     *(In case of JV, turnover certificate for each individual partner of JV)*
   - Self declaration certificate for the value of “B” as per Annexure X of the Bid document.
     *(In case of JV, self declaration certificate of each individual partner of JV)*

7. **Service Tax Status of Bidder** *(Ref. Clause No.8(F) of NIT and BOQ)*
   - The bidder should posses any one of the following documents depending upon the status opted by him in the BOQ sheet:
     - If the bidder has opted:
       1. Small Service Provider and exempted for Service Tax Registration and/or payment of Service Tax:
          A Certificate from a practicing Chartered Accountant that the bidder is exempted for Service Tax Registration and/or payment of Service Tax.
       2. A Body Corporate:
          The Service Tax Registration Certificate issued by Central Excise and Custom Department, Govt. of India.
       3. Other than above two categories:
          The Service Tax Registration Certificate issued by Central Excise and Custom Department, Govt. of India.
          *(In case of JV, above documents as applicable for each individual partner of JV)*

8. **Legal Status of the bidder**
   - Any one of the following document:
     1. Affidavit or any other document to prove proprietorship/Individual status of the bidder.
     2. Partnership deed containing name of partners
     3. Memorandum & Article of Association with certificate of incorporation containing name of bidder
     4. Joint Venture agreement containing name of partners and lead partner, Power of Attorney to the Lead Partner and share of each partner.

9. **Digital Signature Certificate (DSC)**
   - If the bidder himself is the DSC holder bidding on-line then no document is required.
     However, if the DSC holder is bidding online on behalf of the bidder then the Power of Attorney or any sort of legally acceptable document for the
The following documents are to be uploaded in one .pdf file:

1. An Affidavit on a non-judicial stamp paper of minimum value of Rs.10 regarding genuineness of the information furnished by him on-line and authenticity of the scanned copy of documents uploaded by him on-line in support of his eligibility, as per the format given in the bid document at Annexure VI.
2. An Affidavit (No.2) from Bidder giving the following:
   a) The bidder declares that he has gone through all the Special Terms & Conditions and accepts that he will abide by the same.
   b) Address, Telephone Number and e-mail address of Service Centre of OEMs of Cameras, Network/LAN Switches, in India
   c) Address, Telephone Number and e-mail address of Service/Support Centre of Bidder in India.
   d) Declaration that all OEMs/Developers related to the Supply of Major Items are dealing with similar products for more than three years each.
   e) Internet Site Address of OEMs/Developers of Cameras & Video Software, Network/LAN Switches, NAS, Server, Display.

The following documents are to be uploaded in one .pdf file:

1. Valid ISO 9001 certificate of the OEM of Cameras (including Video Management Software/s).
2. Valid ISO 14001 certificate of the OEM of Cameras (including Video Management Software/s).
5. OEM’s declaration or documentary evidence that OEM is in the respective business with same products (Cameras) as OEM, for at least last three years.
6. OEM’s declaration or documentary evidence that OEM is in the respective business with same products (Network/LAN Switches) as OEM, for at least last three years.
7. OEM’s declaration or documentary evidence that the OEMs of Cameras has Sales and Service Centre in India for at least last two Years with Technical Support and that they also have RMA support (or, similar support) in India for the respective Items.
8. OEM’s declaration or documentary evidence that that the OEMs of Cameras has Sales and Service Centre in India for at least last two Years with Technical Support and that they also have RMA support (or, similar support) in India for the respective Items.
9. OEM’s declaration or documentary evidence that the OEMs of Cameras has Sales and Service Centre in India for at least last two Years with Technical Support and that they also have RMA support (or, similar support) in India for the respective Items.
10. OEM’s declaration or documentary evidence/authorization issued by the OEM of cameras for participating in this specific tender, which includes authorisation issued from the OEM with the commitment by the manufacturer confirming minimum six year (one year warranty and five year AMC) support of the system offered and shall guarantee supply of spares & service for the equipment for the service life starting from the date of acceptance & OEMs undertaking in the Technical Compliance Sheet.

Note: In case the bidder is a Joint Venture, the Authorisation may be in favour of any of the partners of JV.
from the date of acceptance & OEMs undertaking in the Technical Compliance Sheet.
Note: In case the bidder is a Joint Venture, the Authorisation may be in favour of any of the partners of JV.
(xii) OEM’s declaration or documentary evidence/authorization issued by the OEM of server for participating in this specific tender, which includes authorization issued from the OEM with the commitment by the manufacturer confirming minimum six year (one year warranty and five year AMC) support of the system offered and shall guarantee supply of spares & service for the equipment for the service life starting from the date of acceptance & OEMs undertaking in the Technical Compliance Sheet.
Note: In case the bidder is a Joint Venture, the Authorisation may be in favour of any of the partners of JV.
(xiii) OEM’s declaration or documentary evidence/authorization issued by the OEM of NAS for participating in this specific tender, which includes authorization issued from the OEM with the commitment by the manufacturer confirming minimum six year (one year warranty and five year AMC) support of the system offered and shall guarantee supply of spares & service for the equipment for the service life starting from the date of acceptance & OEMs undertaking in the Technical Compliance Sheet.
Note: In case the bidder is a Joint Venture, the Authorisation may be in favour of any of the partners of JV.
(xiv) Valid ISO 9001:2008 (or higher) certificate of the bidder

Note: Only one file in .pdf format can be uploaded against each eligibility criteria. Any additional/other relevant documents to support the information/declaration furnished by bidder online against eligibility criteria may also be attached by the bidder in the same file to be uploaded against respective eligibility criteria.

The Tender Committee will examine the uploaded documents against information/declarations furnished by the L1 bidder online. If it confirms to all of the information/declarations furnished by the bidder online and does not change the eligibility status of the bidder then the bidder will be considered eligible for award of contract.

In case the Tender Committee finds that there is some deficiency in uploaded documents or documents have not been uploaded by L1 bidder within the stipulated period then the same will be specified online by Evaluator clearly indicating the omissions/shortcomings in the uploaded documents and indicating start date and end date allowing 7 days (7 X 24 hours) time for online re-submission by L1 bidder. The L-1 bidder will get this information on their personalized dash board under “Upload confirmatory document” link. Additionally, information shall also be sent by system generated email and SMS, but it will be the bidder's responsibility to check the updated status/information on their personalized dash board at least once daily after opening of Price-bid. No separate communication will be required in this regard. Non-receipt of e-mail and SMS will not be accepted as a reason of non-submission of documents within prescribed time. The bidder will upload the scanned
copy of self certified and attested by notary public of those specified documents within the specified period of 7 days.

No additional time will be allowed to the bidder for on-line submission of documents.

The tender will be evaluated only on the basis of documents uploaded by L-1 bidder online. The L-1 bidder is not required to submit hard copy of any document through offline mode. Any document submitted offline will not be given any cognizance in the evaluation of tender.

a. In case the L-1 bidder submits requisite documents online as per NIT, then the bidder will be considered eligible for award of contract.

b. In case the L-1 bidder fails to submit requisite documents online as per NIT or if any of the information/declaration furnished by L-1 bidder online is found to be wrong by Tender Committee during evaluation of scanned documents uploaded by bidder, which changes the eligibility status of the bidder (for the first time), then the EMD of L-1 bidder will be forfeited and re-tender will be done. (with the same or different quantity, as per the instant requirement). In this retender, offer from this bidder will not be accepted.

The Penal action of debarring the bidder in Retender will be restricted to first Retender only. If the first Retender is not finalized and there is second time Retender, then this penal action will not be applicable.

c. If the L-1 bidder fails to submit the requisite documents online as per NIT or if any of the information/declaration furnished by L-1 bidder online is found to be wrong by Tender Committee during evaluation of scanned documents uploaded by bidder, which changes the eligibility status of the bidder, in two tenders, floated by the same tender inviting authority, within a span of one year (to be counted with respect to date of e-publication of NIT), then the EMD of L-1 bidder will be forfeited and this bidder will be debarred for one year from participating in tenders in MCL and re-tender will be done.

d. It is responsibility of L-1 Bidder to upload legible/clearly readable scanned copy of all the required documents as mentioned above.
16. **One Bid per Bidder**: Each Bidder shall submit only one Bid, either individually, or as a partner in a partnership firm or a partner in a Joint Venture or a public limited firm. A Bidder who submits or participates in more than one Bid (other than as a sub-contractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.

17. **Refund of EMD**:

   a). If EMD is paid by the bidder in online mode (Direct Debit/NEFT) then the EMD of rejected bidders will be refunded at any stage directly to the account from where it has been received (except the cases where EMD is to be forfeited), however if the EMD is received through BG then it has to be returned by Registered/Speed Post on rejection of bid at any stage (except the cases where EMD is to be forfeited).

   b). No claim from the bidders will be entertained for non-receipt of the refund in any account other than the one from where the money is received.

   c). If the refund of EMD is not received by the bidder in the account from which the EMD has been made due to any technical reason then it will be paid through conventional system of e-payment. For this purpose, if required Tender Inviting Authority will obtain the Mandate Form from the Bidder.

   d). In case the tender is cancelled then EMD of all the participating bidders will be refunded unless it is forfeited by the department.

   e). If the bidder withdraws his/her bid online (i.e. before the end date of submission of tender) then his/her EMD will be refunded automatically after the opening of Part I tender.

   f). The EMD of successful bidder (on Award of Contract) will be retained by MCL and will be adjusted to Performance Security Deposit. However, EMD deposited by the L1 bidder in the form of BG will be discharged when the bidder furnishes the required Performance Security Deposit (PSD) and signs the agreement.

18. Every tenderer is expected, before quoting his rates, to go through the requirements of materials/workmanship under specification/requirements and conditions of contract and to inspect the site/area of the proposed work at his own cost.

   It shall be deemed that the tenderer has visited the site/area and got fully acquainted with the working conditions and other prevalent conditions and fluctuations thereto whether they actually visited the site/area or not and have taken all the above factors into account while quoting his rates.

19. All Duties, taxes **(excluding Service Tax)** and other levies, payable by the contractor under the contract or for any other cause as applicable on the last date of submission of tender shall be included in the rates, prices and the total bid price submitted by the bidder. All incidentals, overheads etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total bid price submitted by the bidder. **Applicable Service Tax on the works will be computed automatically in the BOQ sheet based on prefix business log in and the option selected by the bidder with regard to his Service Tax status.**
However, such duties, taxes, levies etc. which is notified after the last date of submission of tender and/or any increase over the rate existing on the last date of submission of tender shall be reimbursed by the company on production of documentary evidence in support of payment actually made to the concerned authorities.

The company reserves the right to deduct/withhold any amount towards taxes, levies, etc. and to deal with such amount in terms of the provisions of the Statute or in terms of the direction of any Statutory authority and the company shall only provide with certificate towards such deduction and shall not be responsible for any reason whatsoever.

Share of Service Tax(to be deposited by the Bidder), if any is not to be paid in on account bill but to be reimbursed to the bidder on submission of separate Invoice having therein Name of Bidder, Address, Agreement/W.O. reference, on account bill-wise value, Service Tax Registration No. and Amount of Service Tax deposited(along with a copy of deposit receipt) to avail CENVAT credit by MCL as per Rule. The reimbursement of Service Tax to the bidder will be made on the basis of actual executed value of work and actual Service Tax paid by the bidder on the basis of assessment made by the Service Tax Authority, if any.

20. **Cost of Bidding** : The bidder shall bear all costs associated with the preparation and submission of his bid and the Employer will in no case be responsible and liable for those costs.

21. The tenderer shall closely study all specifications in detail, which govern the rates for which he is tendering.

22. **Currencies of Bid and Payment** : The unit rates and prices shall be quoted by the Bidder entirely in Indian Rupees only.

23. The work should be completed within the stipulated period which shall be reckoned from the **next day of execution of agreement**.

24. On completion of the work all rubbish, debris, brick bats etc. shall be removed by the contractor(s) at his/their own expense and the site cleaned and handed over to the company and he/they shall intimate officially of having completed the work as per contract.

25. The tenderer(s) will deploy sufficient number and size of equipments/machineries/vehicles and the technical/supervisory personnel required for execution of the work.

26. **Change in Constitution of the Contracting Agency** :

Prior approval in writing of the company shall be obtained before any change is made in the constitution of the contracting agency, otherwise it will be treated as a breach of Contract.

27. Canvassing in connection with the tenders in any shape or form is strictly prohibited and tenders submitted by such tenderers who resort to canvassing shall be liable for rejection.

28. The Bidder, whose Bid has been accepted, will be notified of the award on-line and also by registered post by the employer prior to expiration of the bid validity period. The L-1 bidder will get the information regarding award of work on their personalised dash-board on-line. On receipt of Letter for Acceptance (LOA)/Work Order of the tender issued by the Company, the successful tenderer shall execute contract agreement in the company's prescribed form for the due fulfillment of the contract. Failure to enter into the required contract within the specified period in the work
order shall entail cancellation of LOA/work order and forfeiture of the Earnest Money. The written contract to be entered into between the contractor and the company, shall be the foundation of the rights of both the parties and the contract shall not be deemed to be executed until the contract is signed by both the parties i.e. Contractor and the Company.

29. **Bid Validity**: The validity period of the tenders shall be **100 (One Hundred) days from the end date of bid submission**.

   In exceptional circumstances, prior to expiry of the original time limit, the Employer may request the bidders to extend the period of validity for a specified additional period. The employer’s request and the bidder’s responses shall be made in writing. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid but will be required to extend the validity of his bid security/EMD (if submitted in the form of BG) for a period of 28 days beyond the extended validity of the bid.

   The tenderer shall not, during the said period or within the period extended by mutual consent, revoke or cancel his tender or alter the tender or any terms/conditions thereof without consent in writing of the company. In case the tenderer violates to abide by this, the Company will be entitled to take action as per **clause No.30** (Modification and Withdrawal of Bid) of NIT.

30. **Modification and Withdrawal of Bid** :

   Modification of the submitted bid shall be allowed on-line only before the deadline of submission of tender and the bidder may modify and resubmit the bid on-line as many times as he may wish.

   **Bidders may withdraw their bids online within the end date of bid submission and their EMD will be refunded. However, if the bidder once withdraws his bid, he will not be able to resubmit the bid in this tender. For withdrawal of bid after the end date of bid submission, the bidder will have to make a request in writing to the Tender Inviting Authority. Withdrawal of bid may be allowed till issue of work order/LOA with the following provision of penal action:**

   a. If the request of withdrawal is received before online notification for opening of price bid, the EMD will be forfeited and bidder will be debarred for 6 months from participating in tenders in MCL. The Price-bid of remaining bidders will be opened and the tender process shall go on.

   b. If the request of withdrawal is received after online notification for opening of price bid, the EMD will be forfeited and the bidder will be debarred for 1 year from participating in tenders in MCL. The Price-bid of all eligible bidders including this bidder will be opened and action will follow as under:

      i). If the bidder withdrawing his bid is other than L 1, the tender process shall go on.

      ii). If the bidder withdrawing his bid is L-1, then re-tender will be done.

      (The penal action against clause (a) & (b) above will be enforced from the date of issue of such order)

31. The Company reserves the right to postpone the date of receipt and opening of tenders or to cancel the tenders without assigning any reason whatsoever.

32. The Company reserves its right to allow Public Enterprises purchase preference facility as admissible under prevailing policy.
33. This Tender Notice shall be deemed to be part of the Contract Agreement. The “General Terms & Conditions”, Additional Terms & Conditions, Special Terms & Conditions(if any), Technical Specifications, drawings(if any) and any other document uploaded on portal as NIT document forms an integral part of this NIT and shall also form a part of the contract agreement.

34. No subletting of work as a whole by the contractor is permissible. Subletting of work in piece rated jobs is permissible with the prior approval of the department.

The Contract Agreement will specify major items of supply or services for which the contractor proposes to engage sub-contractor/sub-vendor. The contractor may from time to time propose any addition or deletion from any such list and will submit proposals in this regard to the Engineer-in-Charge/Designated Officer-in-charge for approval well in advance so as not to impede the progress of work. Such approval of the Engineer-in-Charge/Designated Officer-in-Charge will not relieve the contractor from any of his obligations, duties and responsibilities under the contract.

35. If the tenderer is awarded the work, he will have to submit VAT Registration certificate on works contract from the state of Odisha, before execution of agreement. However, VAT clearance certificate from the state of Odisha shall be submitted by the said tenderer before release of any payment.

36. The tenderer shall have to ensure implementation of CMPF/EPF, if applicable, in respect of the workers deployed by him as detailed in the tender document.

37. The Company does not bind itself to accept the lowest tender and reserves the right to reject any or all the tenders without assigning any reasons whatsoever and to split up the work between two or more tenderers or accept the tender in part and not in its entirety.

38. Matters relating to any dispute or difference arising out of this tender and subsequent contract awarded based on this tender shall be subject to the jurisdiction of District Court, where the subject work is to be executed.

39. Integrity Pact : The bidders are requested to go through the integrity pact which is a part of the tender document. Shri Ashok Kumar Mohapatra, has been nominated as Independent External Monitor for this tender, whose contact details are indicated as under:-

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Contact Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shri Ashok Kumar Mohapatra, Ex-Secretary</td>
<td>2/14, Ground Floor, Shantiniketan, New Delhi-110021</td>
<td>Ph:011-24675488 Mob:9868880128 e-mail: <a href="mailto:ashokmohapatra@hotmail.com">ashokmohapatra@hotmail.com</a></td>
</tr>
</tbody>
</table>

GM(E&M)/HOD(E&T), MCL
A. SCOPE OF WORK FOR CCTV SURVEILLANCE SYSTEM:

The Scope of Work is to Design, Supply, Installation, Testing and Commissioning with Comprehensive AMC for five years after one year warranty period of an IP Network based CCTV Surveillance System on Turnkey basis at Regional Stores of Bharatpur Area, Hingula Area, Lingaraj Area, Talcher Area, Ib Valley Area, Lakhanpur Area, Orient Area, BG Area, Central/Regional Store, Jagannath Area and Central Workshop, Talcher and Central Workshop, Ib Valley. of Mahanadi Coalfields Ltd., as per given Technical specifications, Special Terms and Conditions, and other NIT Terms & Conditions.

B. Special Terms & Conditions:

1. The System will function Round the Clock (24 * 7) on all days.
2. The Camera Surveillance Network will be installed at the following ten sites of MCL:
   (i) Central Workshop, Talcher (ii) Regional Store Bharatpur Area (iii) Central/Regional Store, Jagannath Area (iv) Regional Store, Lingaraj Area (v) Regional Store, Hingula Area (vi) Regional Store, Talcher Area (vii) Regional Store, Ib Valley (viii) Regional Store, Lakhanpur Area (ix) Regional Store, Orient Area (x) Central Workshop, Ib Valley and (xi) Regional Store, BG Area
3. No. of cameras at different sites are indicated in the BOQ attached. Camera specifications, and Specifications of other associated Items are given in Technical Specifications attached. Quantities required are also mentioned in BOQ. Quantities are Firm except for Cabling and Wiring items, which will be accepted on actual basis subject to acceptance of any such deviation by MCL due to technical or any other reasons. However, any additional item, accessories and related jobs necessary for completion of the installation as per scope of work, will be presumed as included even if not specifically mentioned in BOQ/NIT, and the successful bidder will provide them without any extra cost.
4. The interested bidders may visit/survey the site to acquaint themselves of the site conditions, at their own cost and risk, before submitting their offers, if required.
5. All the cameras are to be networked in a LAN with switches at identified places. The position of installation of camera and other components will be decided in consultation with Engineer -In- Charge of MCL of the respective site before installation.
6. a) The OEMs of main active equipments, i.e. Cameras (including Video Management Software/s), and Network/LAN Switches, should be renowned and ISO 9001 and ISO 14001 certified company and should be in the respective business with same products (Cameras/Switches) as OEM, for at least last three years. OEM of Cameras should ensure that such Cameras are suitable for surveillance in Industrial Environment. The OEMs of Cameras and Switches should have Sales and Service Centre in India for at least last two Years with Technical Support. They should also have RMA support (or, similar support) in India for the respective Items. Documentary evidence/Authorisation from OEM as asked for in the List of Documents required to be Uploaded by the Bidder as indicated in the NIT.

b) The bidder must have valid ISO 9001:2008 (or higher) certification for QMS. The Bidder/System Integrator should also have a Service/Support Centre in India which should be functional for at least last two years.

C) The bidder shall submit a letter of Authorization issued from OEM of camera, switches, server and NAS notarized copy for participating in this specific tender, which includes authorisation issued from the OEM with the commitment by the manufacturer(s) confirming minimum six year (one year warranty and five year AMC) support of the system offered and shall guarantee supply of spares & service for the equipment for the service life starting from the date of acceptance failing which the offer shall be liable for rejection. Notarised self-certified Copy of OEM’s Authorisation/Undertaking for Sales and Service for/to the Bidder for camera, switches, server and NAS (incl. Video Management Software/s), should be submitted by the bidder as asked in NIT.

7. Also all OEMs of Cameras, Switches, Server, NAS, Displays, UPSs and Developers of Video Softwares, are expected to have presence in the Internet indicating the Product/s offered under their current Products. Any indication by OEM/Developer of discontinuation of any Product offered and/or stoppage of Service Support to a product, declared before the last date of submission of offer, will disqualify the concerned offer.

8. MCL will also have the right to reject any offer on inadequate information on OEM/Developer/Product/s, poor Service/Support infrastructure and/or non-conformance of NIT conditions by any of Bidder, OEM/Developer or, any Product.

9. All Major Items (e.g. Cameras, Switches, Server, workstation, NAS, Displays, UPS, and Video Management Softwares must be supplied with OEM/Developer’s user’s Manuals and/or Brochures. Any Manual, Document, Software, Warranty etc. supplied/supported by OEM/Developer alongwith any item normally, will be the property of MCL. Service Support of all active items must be available in India and/or through net.

10. All Items supplied should satisfy the respective Technical Specifications as specified. Where (~) sign has been given ,it specifies the values/ranges of parameters.

11. Bidders will be responsible to ensure that the offered Items satisfy the Technical Specifications and Special Terms and Conditions, and also the OEMs and their relationship with the bidder satisfy all NIT conditions.

12. Make & Model etc.: All Major Items should be of renowned make who regularly follow International Standards for their Products and acquire related Certification/s. Bidders are to submit the Make, Model and Softwares (with Versions) of Cameras/Video Management Software, Network/LAN switches, Server & NAS in the Format given, duly filled by the OEM as per format in the Technical Compliance Sheet. Incomplete or ambiguous information submitted will make the offer liable to be rejected. Decision of MCL on the same will be final.
13. It will be the responsibility of the bidders to ensure/establish satisfaction of NIT conditions by their offered Products. Make and Software should be of specific name/Brand without any ambiguity/generalization. Model and Software Version may be specific or identifying the Series of the Product of OEM. No product should be obsolete. Model will mean any unique identification of the item by the OEM.

14. All Items/Subsystems (e.g. Camera, Switch, NAS, Server, Display, UPS, Battery etc.) should be supplied with suitable accessories including required cords for Power Supply and Network Connection, Fixing/Placement arrangement etc. as applicable, even if the same are not specifically mentioned in BOQ/Tech Specifications.

15. Details of OEMs/Developers of all major items including Softwares, etc., outsourced and supplied, should be submitted with product description and OEM/Developer’s Product code, and name and Address of OEM/Developer and/or, their authorized Distributor in India. All such OEM/Developer must be dealing with similar products for more than three years.

16. Irrespective of whatever documents submitted by the Bidder on line and their acceptance, MCL may further call for any relevant document from the Bidder and/or, any OEM/Developer/s, and/or any certifying authority, and/or any other entity, for examination before finalization of Contract. The bidder will ensure/facilitate to submit/getting such documents to/by MCL within 15 days or, as stipulated by MCL.

17. All Cameras and Video Management S/W shall be from same OEM.

18. All network Switches should preferably from the same OEM.

19. All Fiber Cores (used/Spare), are to be duly terminated on the Fiber patch panels, and all required accessories like pigtails, adaptors, couplers etc. required to achieve this should be supplied. Connections to all end nodes including Cameras/ Workstation/ Server/ NAS, etc. should be achieved using structured cabling comprising of Cat 6 I/O with SMB Box at the node end and 24/12 Port Cat 6 Jack Panel at the Switch end.

20. All Materials supplied should be brand new ones and all softwares supplied should be updated versions during submission of offer.

21. All Items installed Outdoor should be sufficiently robust and should be suitably corrosion resistant, Weather tolerant and Vandal Resistant.

22. All moving Items should be of high quality with high longevity, smooth operation, very low wear and tear, temperature controlled, no noise, and manufactured for continuous operation, wherever applicable.

23. Mount Adaptors for Cameras from Roof/Wall/Corner/Pole etc. should be of appropriate types with high flexibility for adjustment of viewing and ensuring best possible views. The adaptors and other accessories should be standard quality. For PTZ Cameras the adaptors should not block any view during complete movement of the Camera.

24. Placement and Housing for all outdoor Cameras should be vandal resistant. Indoor Cameras also should be reasonably placed and housed to ensure reasonably good protection.

25. Aesthetics, Proper finishing, Maintainability and Longevity aspects are of vital importance and should be duly taken care of by the Contractor during installation.

26. Any facility/feature of any supplied item which are offered by the respective OEM/Developer without any additional cost, will have to be made available to MCL without any additional cost, even if the same is not mentioned in NIT.

27. Network Switches, NAS, Server and Work Station, including their softwares should be both IPv4 and IPv6 compatible and dual stack configurable, wherever applicable.
28. All the Cameras should be of True Day & Night type, capable of recording reasonably good quality video round the clock at normal ambient lights/ IR.

29. Cable Laying:
   a) Underground Cabling through Hard Surface / Road, will be through HDPE/GI pipes with a depth of minimum 0.3 meter. All other outdoor underground cabling will be considered as soft soil with laying at a depth of minimum 1.05 mtr through HDPE/GI pipes. HDPE pipes should be joined with proper couplers which, and any other associated accessory required for the purpose should be supplied with the cables. The ends of HDPE pipes also should be properly sealed. The installation/maintenance of HDPE pipes should be done using proper tools.
   b) Where due to Technical reason or, so, depth of Cable laying is required to be low, the installation charges will be proportionately reduced with 70% weightage (e.g. at 60% depth the rate of installation charge will be reduced by 28% (40*70)).
   c) Where ever sufficient depth is not achievable or achieved as per terms & conditions, the same is to be brought to the notice of the concerned Project Engineer-In - Charge/Site in-charge at the respective sites & his/her consent be taken. This is aspect is to be mentioned in the final installation drawings to be submitted by the successful bidder after completion of the installation work, where locations with insufficient depth are to be marked/indicated.
   d) Suitable Joint Boxes to be placed where through/branching of such cable is necessary. Such Joint boxes should be suitably rugged and safely placed.
   e) Proper filling and dressing of the surface must be ensured for underground cable laying. Clearly visible G.I. Cable Markers should be placed and suitably fixed along the underground Cable route at an approx. distance of 200m. Length of cable laying will be as per actuals whereas amount of Cable will be 5% higher than the length of underground pipes and also for surface cabling through pipes/Casing-capping. This will be in addition to spare/excess cable maintained at joints/terminations etc. for future maintenance use, if any, on consultation/advice of MCL.
   f) Proper documentation should be prepared for Cable layout indicating detailed layout of cables installed underground, mentioning their location/distance with reference to nearby fixed structures or walls, approximately at every 20 mtrs/turnings etc. for easily locating the buried cables afterwards.

30. Wiring/cabling standard: All wiring/cabling/terminations/patches must follow EIA/TIA standards wherever applicable. All Cabling should have proper non-perishable identification at the terminals for easy tracing. Proper documentation with diagram should be made for all wiring/cabling/terminations. All indoor wirings/Cablings should be properly secured, duly terminated, easily maintainable and aesthetically sound.

31. The Contractor will ensure proper survey for pole erection etc.

32. Placement/Fittings etc.: All Equipments installed should be properly placed which should be secure, aesthetic, convenient for maintenance, healthy from operational and fault liability point of view and follows standards (Industry and/or recognized authority) wherever applicable. It will include placement of all switches in suitable Racks, Fitting of Cameras on wall/ceiling/corners/Polls/Brackets etc., other hardwares including Power Supplies in suitable Racks/enclosures/stands etc.

33. Any License, Clearance etc. required for any sub-system or the Complete System, will be the responsibility of the Contractor. However, MCL will assist in signing the Forms etc. required to be filled up for the purpose, if any, and pay for any statutory/royalty payment to government authority. Normally all licenses/clearance should be for life time. Where any such License/clearance is time bound, the period of License/Clearance should be for a minm. Period of seven Years from the date of installation & commissioning.

34. The Contractor will be fully responsible for the quality of the items supplied, quality of Workmanship, Aesthetics, quality of Integration of various components of the System, user-friendliness
of the System, proper Security of the System, maintainability of the System and ensuring satisfactory
achievement of the objectives of the System as explained in various clauses here and the Scope of Work.
35. Power Supply:
a) Unregulated Power supply (nominal 220 V AC), will be provided by MCL at/near master operator
control room, Server room, Switches and any other place required for the installation. However, the
contractor will arrange for any additional power wiring/distribution, and also for regulation/stabilization
of voltage required. All such works must be technically and aesthetically sound and standard based,
wherever applicable.
b) The bidder will ensure that protections provided in the equipment work properly in case of any
abnormal electrical condition. MCL will make best efforts to ensure a healthy power supply, how ever
in case of any damage to the equipment due to abnormal power supply or any other electrical
disturbance, the damage has to be rectified by the vendor without any additional cost to MCL.
c) The bidder will ensure to provide necessary protection system/module for the entire CCTV system
from lightning, even if not mentioned in the BOQ. In addition to the material as provided in the BOQ,
the vendor is free to add additional equipment or protection system to strengthen the protection system
at his own cost.
d) Any damage caused to the equipment/system due to lightning and/or abnormal power supply has to
rectified/repairs by the bidder without any extra cost to MCL during warranty and/or AMC.
36. Earthing: Arrangement of good chemical earthing should be made by the contractor for NAS/Server
equipment. Additional requirement of earthing at any other place/equipment, if required should also be
arranged without additional cost.
37. Specifications: All Specifications specified in the Tender Document are minimum requirements.
Better products satisfying all the given specifications will be acceptable. In case of New Version/Model
(than the offered one) of any item coming up before supply or, for any other justified reason, the change
of Version/Model etc. of an item can be considered by MCL without any additional cost with the
following:
a) OEM remains same.
b) The new Version/Model satisfies all the Technical Specification of NIT.
38. The contractor will arrange for all tools/tackles, testing instruments, software etc, required for installation and testing of the Network.
39. The contractor will be fully responsible for safety of its personnel engaged in installation
work. He will ensure that he and his personnel abide by the provisions of all relevant acts
applicable, relating to the work. He will also ensure that he abides by all the rules and
regulations of central and state governments and any local authority while executing the
work. The contractor will indemnify MCL from any consequences caused due to his failure
in this regard and will be solely responsible to bear them.
40. The Contractor will ensure to follow the Minimum Wages Act, Workmen’s
Compensation Act and any other relevant law of the land in this respect, and also ensure PF
payment to all its employees engaged for the work as per rule. MCL will have the right to
call for any documentation in this regard, instruct the contractor and take any action as
decided fit, in case of deficiency. The Contractor will be solely responsible for all liabilities
in these regard.
41. The System should be fully ready in all respect for the total cameras supplied at a
particular site.
42. Decision of GM(E&T), MCL should be generally acceptable and Final to settle any dispute, which will be referred to him.

43. Minor typographical/spelling or similar mistake anywhere in the NIT will not make it invalid, until the same changes the character of the communication meant for significantly, and the correct word/meaning will be presumed for the same. Decision of MCL in this regard will be final.

44. Design and System Engineering: The successful Tenderer on receipt of the S.O./Letter of Intent, will do a detailed Design & System Engineering and submit a bounded, page numbered and Indexed Report. The Design & System Engineering Report should be prepared keeping in view the guidelines here and on close coordination with Engineer-in-Charge of respective site of MCL at and any other person, if deputed by GM(E&T), MCL for the same. The Report should be submitted within 30 days of issue of S.O./W.O. The Report will contain the following:

i) A Schematic Diagram of the Network showing the sites, all the sub-units, their connectivity, major equipments etc. with proper legends.

ii) Sitewise detailed diagram for each part of the site. Equipments & software list for each part should be shown covering all the Equipments and softwares.

iii) Detailed Cable Layout/Wiring Diagrams of the Installations with lengths/pairs/terminations etc.

iv) Details of field assembled/ site dependent items like Masts, Earthing, Type of Mount Adaptors for each Camera etc.

v) In addition to sitewise Equipment/Software list, there should be an Equipment/Software-wise list giving Identity (Make/Model), Qty. and placement.

vi) A brief description on how the System is built up and integrated should be included in the report.

vii) Special/notable features of the Components and the System should be indicated in the Report.

viii) Any required clarification on Installation of the System may also be included.

ix) The Installation work should start immediately on acceptance of the Design & System Engineering Report by the respective Engineer-in-Charge. In case, any modification of the Report is required, the same should be accomplished within seven days and a modified Design & System Engineering Report showing such changes should be submitted subsequently.

x) The Contractor will be fully responsible for design of the System which should be done keeping in view the requirements of MCL in full and the Technical Specifications (taken as minimum requirement). Safety of the Maintenance and operational personnel of MCL and Contractor should also be kept in mind and ensured while designing the System.

45. All materials, Softwares etc. supplied will be accepted for installation on physical external inspection only. The Same will be handed over to the Contractor for installation. The Contractor will be fully responsible for any defect found during installation and will replace the same forthwith with new ones without any extra cost. All materials incl. Softwares should be supplied with associated accessories. Self-attested Certificates/Listing Proof and/or Product Marking as per Tech. Spec. should be submitted/available with Supply for Major Items.

46. Pre-Commissioning Inspection and Test (Part of Installation
Program): On installation, the System and its Components will be jointly (in presence of both the contractor and MCL representatives) tested as follows:

- a) All equipments and installations will be individually inspected physically.
- b) Individual active equipment will be tested with Power. Passive items also will be tested wherever feasible.
- c) Different Sub-Systems will be tested wherever feasible.
- d) Then, the system will be tested in integrated manner.
- e) The parameters of testing will be jointly decided keeping in view the technical specifications, scope of work and Special Terms & Conditions, and BOQ.
- f) On acceptance of the test results by Engineer-in-charge as satisfactory, trial run will start.
- g) Trial run will be started only after acceptance of the test result by Engineer-in-charge

47. Trial Run and System Acceptance:

- a) On acceptance of testing of the system, the system will be put under trial run. Trial run of the system will be for a minimum period of 10 days. During trial run, the System will be tried to run at maximum possible load and the operation of the system will be closely monitored. All special events and users reports will be recorded and analyzed for any undesirable functioning. All System logs will also be taken into consideration for analysis. Any problem in the functioning will be urgently attended to and set right by the installation Engineer who should be readily available at the site along with necessary tools/spares etc. If any fault continues for more than 24 hours, trial run will be extended for such period. During trial run, among other things, there may be requirements for adjustments in physical placements, software configuration change etc. which should be carried out by the contractor.
- b) On successful trial run and acceptance of the same by Engineer-in-charge, the system will be taken as commissioned and the Engineer-in-Charge will issue a System acceptance Certificate for the particular site.
- c) On the basis of system acceptance certificate issued by the site engineers/ site in charge of each of the sites, a combined final installation certificate shall be issued by the GM(E&T), MCL Hq. Warranty of the complete system, for all the eleven sites, will be considered from the date of successful commissioning of all the sites or the date of successful commissioning and acceptance of the last site, which ever is later. The final installation certificate will be issued only after successful trial run & commissioning of all the sites & no Final Installation certificate for individual sites will be issued.
- d) However during the period between the date of acceptance of the system at a particular site and start date of the warranty for the entire eleven sites, the system will maintained in all respect by the contractor at their own cost.

48. Acceptance of the System by MCL will not absolve the Contractor from all of his liabilities. In addition to whatever has been stated in NIT, the Contractor will be liable for any deficiency in the System traceable to be due to deficiency on the part of the Contractor in Supply/Execution or any other aspect, during six years from the date of acceptance of the System.
49. Handover of Documentation: - On commissioning of the system, the contractor will handover the following documents, wherever relevant, to the Engineer-in-charge:
   i. Detailed schematic Network diagram of the complete installation.
   ii. Detailed diagram of all sub-systems of the Network.
   iii. Detailed Cable/Wire Network as installed.
   iv) All configuration details including different related lists.
   v) Any license/permission or related documents,
   vi) Test results.
   vii) Any operation and/or maintenance procedures etc.
   viii) List of Equipments supplied/installed and other items used (e.g. Wires/Cables), Softwares, Portable Equipments and Spares. The list must include Make, Model, Brand, Version, Sl. No. etc., as applicable.
   ix) Sitewise list of Equipments, Softwares etc.
   x) Itemwise List of Manuals, CDs etc.
   xi) Internet Sites of all the Suppliers of different Items.
   xii) Any other relevant document/Information as required as per the NIT, or, as may be required for operation/maintenance of the system or, otherwise, relating to individual Item/ the System.

In case, any document is already supplied before commissioning and have not undergone any change, the same will be accepted by MCL with the Contractor certifying that the same is Final and MCL is satisfied on the same.

All the Documents should bear the reference NIT No. of MCL, have a Heading, duly numbered with contractor’s ref. No., and signed with seal by the authorized representative of the Contractor. However any Original Document like License, may be submitted with Forwarding letter only from the Contractor.

All the documents to be submitted to MCL within 30 days of Commissioning of the System.

50. MCL will have the right to call for any further documents/clarification from the Contractor on Products supplied at any stage. The Contractor has to submit such documents within required time of receipt of such communication.

51. Training:
The Contractor will provide on site training to operational/Technical Personnel of MCL of the respective site, (deputed by the concerned engineer-in-charge) and also users during/on installation and maintenance of the System. In addition, the Party will also arrange a training for up to 20 Technical personnel (in batches) of MCL on the Camera, switch & server/ NAS at Developer/OEM/OEM authorized service centre/ training centre/ premises, free of cost, within one year of installation, if desired by MCL. The duration of such training will be for a minimum of six days, and the course content should cover operation/configuration/maintenance of camera, Video Management System, NAS/server, networking switches. How ever the same may be decided in consultation with GM(E&T), MCL. The cost of training has to be borne by the bidder, however cost TA/DA and accommodation of MCL personnel will be borne by MCL.

52. During warranty period, minimum one Service Engineer will be posted in Talcher Coalfields and one in Ib Coalfields. The service engineer posted at Ib Coalfields will look after the work of Ib Coalfields as well as Basundhara Coalfields as required.

C Annual Maintenance Contract (AMC):
(i) The Contractor will ensure Comprehensive AMC of the whole System (including Cost of Spares and Maintenance/upgradation of Softwares etc.) for minimum 05 (Five) Years after 1 (One) year warranty period, at specified rate to be indicated in price bid/W.O./S.O.

(ii) If average AMC rate quoted by the bidder per annum is less than 5% of value of the supply items, then an amount equal to the difference of 25% of value of the supply items and AMC order value for 5 years quoted by the vendor, shall be deposited as “Retained Amount” in the form of Bank Guarantee along with Performance Bank Guarantee, by the Successful bidder awarded the work.

(iii) The above retained amount, if applicable, shall be released after the completion of the 5 year AMC period

(iv) Payment against AMC will be made on quarterly basis after completion of each quarter of AMC, duly certified/accepted by the Engineer-In-Charge, after deduction of penalty/statutory dues or any other dues if any, against the submission of quarterly bills.

**TERMS & Conditions of AMC :**

1. During AMC, the supplier will ensure that the System will be physically checked and standard Tests are done at least once in a week, and attended to any fault noticed/contemplated.
2. During AMC, Minimum one Service Engineer will be posted in Talcher Coalfields and one in Ib Coalfields. The service engineer posted at Ib Coalfields will look after the work of Ib Coalfields as well as Basundhara Coalfields as required. The service engineer posted should look after all the installation sites as required. The Service personnel should be well trained and must be equipped with all required spares, softwares and testing instruments etc. while attending the System. MCL will have the right to ask for change of maintenance personnel in case he is found to be in-effective technically or, not of desirable attitude/behaviour or for any other reason, and the contractor will comply the same at the earliest and not later than 60 days.
3. The list of standard tests and their periodicity will be prepared by the contractor and submit to Engineer-in-Charge/ Site In Charge of MCL. The Engineer-in-Charge/ Site In Charge of MCL will have the authority to include any other test/s and/or change the periodicity of any/all tests, at any time. This will be part of preventive maintenance.
4. The System should also be attended to on report of any fault within 24 Hrs of reporting over Tel/E-mail/FAX/Letter/SMS etc. to its representative.
5. The details including Name, Address, Mobile No. and email Address of the Service representative should be intimated to MCL.
6. Scope of AMC will include maintenance of all the equipments supplied and installed, softwares, Installation works e.g Wiring/Cabling/Masts/Earthing etc. relating to this W.O., and their integration. Change in configuration/Use of Spare Item/s, if any, etc., will be decided by MCL time to time which should be carried out by the Maintenance personnel of the Contractor. Supply & fixing of spares/modules/softwares or any other items as required for rectification of the breakdowns will be under
the scope of the AMC and will be provided by the AMC holder without any additional cost to MCL.
7. All Masts & Brackets should be painted with quality weather-resistant paint every alternate year.
8. However additional Cable Laying/Wiring will not be part of maintenance work under AMC.
9. Monthly report of AMC works done to be submitted to Engineer -in- charge/ Site In Charge by the Contractor. Engineer -in- charge/ Site In Charge may ask for additional reports, if required, which should be complied with.
10. The System will be considered under Major breakdown if more than 20% Cameras at the particular site can’t be recorded/viewed. Any such fault and faults affecting the common features of the System will also be considered as major fault
11. All Major faults must be attended and rectified within 48 hrs. of reporting. Failing which deduction of AMC charges will be done as mentioned below:

\[ A = \text{AMC value per camera per annum} \]
\[ = \text{Total AMC value for all sites per annum ÷ Total no. of cameras.} \]

\[ B = \text{AMC value of a particular site per annum} \]
\[ = \text{Total No. cameras at the particular site} \times A \]

\[ C = \text{AMC value of a particular site per day} \]
\[ = \frac{B}{365} \]

*Break down days : No. of Breakdown hours ÷ 24.*
*(For 12 hour or more, break down period will taken as one complete day)*

\[ D = \text{AMC value per camera per day} \]
\[ = \frac{A}{365} \]

Deduction for major breakdown:

\[ P1 = \text{For initial 48 hour period} = C \times \text{no. of break down days} \]

\[ P2 = \text{For period beyond 48 hours} = C + \text{Additional penalty of 10% of C} \]
\[ = C \times 1.1 \]

Total deduction for major breakdown = \( P1 + P2 \)

12. All other faults should be attended to and rectified within 72 hours of reporting failing which deduction of AMC charges will be done as mentioned below:

Deduction for minor breakdown

Deduction for minor breakdown per camera = \( D \times \text{No of breakdown days} \)
13. In case of unsatisfactory performance on AMC, MCL will have the right to cancel the AMC contract and/or bar the supplier from taking part in any MCL Tender and/or ask for any compensation and any other action against the party, as deemed fit by MCL.

14. MCL will have the right to extend the Network with additional Cameras at any point of time. The Contractor will provide maintenance services required considering such changes with proportionate increase (camera wise) of charges.

15. The bidder will renew and update all Software licenses (antivirus, camera licenses, any other license) installed in the CCTV system, during the entire tenure of the AMC period.

16. At the end of the AMC period the vendor will hand over the system in full working order.

17. The contractor will be solely responsible for the safety of the maintenance personnel engaged for the purpose. The contractor will also ensure that all relevant Acts and rules applicable including Minimum Wages Act, Workmen’s Compensation Act and PF Payment to the Workers engaged, are complied with. The contractor will also ensure that all rules & regulations of the Central government, State government and Local authority in this connection are followed. The contractor will indemnify MCL from any obligation/consequences arising out of any lapses in respect of the above and will bear the sole responsibility for the same. MCL will have the right to call for any documentation in these regard from the contractor, and take any action as deemed fit in case of no/unreasonable response or, any deficiency from the contractor.
1. **IP PTZ, High Definition, Day/Night, Wide Dynamic Range, Dome Camera for outdoor installation**, including required power supply, complete with accessories including IP 66 rated housing.

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Image Sensor</td>
<td>1/2.7” or 1/2.8” or 1/3” progressive CMOS or better</td>
</tr>
<tr>
<td>2</td>
<td>Lens</td>
<td>3.5 mm ~ 4.7 mm to 91 mm ~ 94 mm or better</td>
</tr>
<tr>
<td>3</td>
<td>No. of pixels</td>
<td>1920 x 1080 or better</td>
</tr>
<tr>
<td>4</td>
<td>Video Streaming</td>
<td>Dual streaming: H.264 / MJPEG Individually configurable/Controllable frame rate &amp; resolution</td>
</tr>
<tr>
<td>5</td>
<td>Focus mode</td>
<td>Auto</td>
</tr>
<tr>
<td>6</td>
<td>Video Resolution</td>
<td>CIF, 4CIF, 720p, 1080p</td>
</tr>
<tr>
<td>7</td>
<td>Type</td>
<td>Day &amp; Night Automatic</td>
</tr>
<tr>
<td>8</td>
<td>Minm. Illumination</td>
<td>0.05 lux (B/W), 0.5 lux (Colour)</td>
</tr>
<tr>
<td>9</td>
<td>Electronic Shutter</td>
<td>Auto/Manual</td>
</tr>
<tr>
<td>10</td>
<td>Zoom</td>
<td>20X Optical Zoom minimum, 12X Digital Zoom minimum</td>
</tr>
<tr>
<td>11</td>
<td>S/N Ratio</td>
<td>&gt;=50dB</td>
</tr>
<tr>
<td>12</td>
<td>Auto Gain Control</td>
<td>Yes</td>
</tr>
<tr>
<td>13</td>
<td>Audio</td>
<td>Duplex</td>
</tr>
<tr>
<td>14</td>
<td>White Balance</td>
<td>ATW, Manual</td>
</tr>
<tr>
<td>15</td>
<td>Wide Dynamic Range</td>
<td>50dB Minm</td>
</tr>
<tr>
<td>16</td>
<td>Video Compression</td>
<td>H.264/MPEG-4, MJPEG</td>
</tr>
<tr>
<td>17</td>
<td>Frame Rate</td>
<td>25fps (PAL)</td>
</tr>
<tr>
<td>18</td>
<td>PAN</td>
<td>0-360°</td>
</tr>
<tr>
<td>19</td>
<td>Tilt</td>
<td>0-90°</td>
</tr>
<tr>
<td>20</td>
<td>Preset Position</td>
<td>8 (Minm.)</td>
</tr>
<tr>
<td>21</td>
<td>Pan speed</td>
<td>1°/sec to 90°/sec or more</td>
</tr>
<tr>
<td>22</td>
<td>Preset Tours</td>
<td>8 (Minm.)</td>
</tr>
<tr>
<td>23</td>
<td>Privacy Mask</td>
<td>Upto 4 Zones (Minm.)</td>
</tr>
<tr>
<td>24</td>
<td>Users</td>
<td>Upto 8 simultaneous Unicast User</td>
</tr>
<tr>
<td>25</td>
<td>Security</td>
<td>Password Protection, IP Address Filtering</td>
</tr>
<tr>
<td>26</td>
<td>Supported Protocols</td>
<td>IPv4/IPv6, IP, HTTP, HTTPS, TCP, RTSP, RTP, ICMP, UDP, IGMP, FTP, DHCP, ARP, SNMP, ONVIF and as required for system working</td>
</tr>
<tr>
<td>27</td>
<td>Interface Compliance</td>
<td>ONVIF</td>
</tr>
<tr>
<td>28</td>
<td>Power Supply</td>
<td>230V AC/24 VAC/ 12 AC, POE+ ( IEEE 802.3at)</td>
</tr>
<tr>
<td>29</td>
<td>Interface</td>
<td>10/100 Mbps Ethernet</td>
</tr>
<tr>
<td>30</td>
<td>Weather Proof enclosure</td>
<td>IP66 or Nema-4</td>
</tr>
<tr>
<td>31</td>
<td>Operating Temp.</td>
<td>0-50°C</td>
</tr>
<tr>
<td>32</td>
<td>Operating Humidity</td>
<td>Up to 90% (Non-condensing)</td>
</tr>
<tr>
<td>33</td>
<td>Supporting Language</td>
<td>English</td>
</tr>
<tr>
<td>34</td>
<td>Marking and Certification</td>
<td>UL listed/EN, FCC Certified/ CE Certified</td>
</tr>
<tr>
<td>35</td>
<td>Installation</td>
<td>Complete installation/ configuration of the camera with supply of suitable mountings for outdoor installation, power supply/power injector/power adapter and other accessories as required</td>
</tr>
</tbody>
</table>
2. 2 Mega Pixel- High Definition- IP Box/Bullet camera with Built-in IR, PoE & 2 way Audio., complete with accessories, including IP 66 rated housing for Indoor/Outdoor installations.

<table>
<thead>
<tr>
<th>No.</th>
<th>Specifications</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sensor</td>
<td>1/2.7” or 1/2.8” or 1/3” progressive CMOS or better</td>
</tr>
<tr>
<td>2</td>
<td>Lens</td>
<td>3 - 9 mm varifocal or better</td>
</tr>
<tr>
<td>3</td>
<td>Type</td>
<td>Day &amp; Night</td>
</tr>
<tr>
<td>4</td>
<td>No. of pixels</td>
<td>1920 x 1080 (1080p)</td>
</tr>
<tr>
<td>5</td>
<td>Minm. Illumination</td>
<td>0.0 lux (B/W with IR), 0.25 lux (Colour) or better</td>
</tr>
<tr>
<td>6</td>
<td>IR Distance</td>
<td>Minimum 25 meter or better</td>
</tr>
<tr>
<td>7</td>
<td>Electronic Shutter</td>
<td>Auto/Manual</td>
</tr>
<tr>
<td>8</td>
<td>S/N Ratio</td>
<td>&gt;=50dB</td>
</tr>
<tr>
<td>9</td>
<td>Auto Gain Control</td>
<td>Yes</td>
</tr>
<tr>
<td>10</td>
<td>White Balance</td>
<td>ATW, Manual</td>
</tr>
<tr>
<td>11</td>
<td>BLC</td>
<td>On/Off</td>
</tr>
<tr>
<td>12</td>
<td>Audio</td>
<td>Duplex / two way</td>
</tr>
<tr>
<td>13</td>
<td>Video Resolution</td>
<td>CIF, 4CIF, 720p, 1080p</td>
</tr>
<tr>
<td>14</td>
<td>Video Compression</td>
<td>H.264/MPEG-4, MJPEG</td>
</tr>
<tr>
<td>15</td>
<td>Streaming</td>
<td>Dual streaming: H.264/ MJPEG Individually configurable/Controllable frame rate &amp; resolution</td>
</tr>
<tr>
<td>16</td>
<td>Frame Rate</td>
<td>upto 25fps (PAL)</td>
</tr>
<tr>
<td>17</td>
<td>Supported Protocols</td>
<td>IPv4/IPv6, IP, HTTP, HTTPs, TCP, RTSP, RTP, ICMP, UDP, IGMP, FTP, DHCP, ARP, SNMP, ONVIF and as required for system working</td>
</tr>
<tr>
<td>18</td>
<td>Advanced Feature</td>
<td>Built in motion detection feature with configurable Activity Controlled variable Frame Rate.</td>
</tr>
<tr>
<td>19</td>
<td>Alarm</td>
<td>1 in &amp; 1 Out</td>
</tr>
<tr>
<td>20</td>
<td>Security</td>
<td>Password Protection, IP Address Filtering</td>
</tr>
<tr>
<td>21</td>
<td>Interface Compliance</td>
<td>ONVIF</td>
</tr>
<tr>
<td>22</td>
<td>Power Supply</td>
<td>POE (802.3af) and DC/AC</td>
</tr>
<tr>
<td>23</td>
<td>Connectors</td>
<td>10/100 Mbps Ethernet, Audio In/Out, Alarm Input/Output, Power</td>
</tr>
<tr>
<td>24</td>
<td>Weather Proof enclosure</td>
<td>IP66 /Nema-4 certified</td>
</tr>
<tr>
<td>25</td>
<td>Supporting Language</td>
<td>English</td>
</tr>
<tr>
<td>26</td>
<td>Operating Temp.</td>
<td>0-50⁰C</td>
</tr>
<tr>
<td>27</td>
<td>Operating Humidity</td>
<td>upto 90% (Non-condensing)</td>
</tr>
<tr>
<td>28</td>
<td>Marking and Certification</td>
<td>UL listed/EN, FCC Certified/ CE Certified</td>
</tr>
<tr>
<td>29</td>
<td>Installation</td>
<td>Complete installation/ configuration of the camera with supply of suitable mountings for indoor /outdoor installation, power supply/power injector/power adapter and other accessories as required.</td>
</tr>
</tbody>
</table>
3. Specification of NAS equipped with minimum 8 TB storage capacity in RAID-5 configuration:

a) Rack Mounted with necessary accessories.

b) Processor: Intel Xeon.

c) RAM: 8GB DDR3 (Minm.), expandable to 12GB.

d) Network connectivity: Gigabit NICs - 2 Nos., with TCP/iSCSI offload capability.

e) Ports: USB2.0- Minimum 2 Nos, in addition to other System required Ports.

f) Hard Drive Slots: 8Nos. (minm.) For SATA II/SAS HDD (1TB/2TB/3TB/4TB), equipped with minimum 8 TB storage capacity in RAID-5 configuration with future expandability, hot swappable.

g) RAID:5 configuration.

h) Minm. 64Nos. Logical Unit Numbers (LUN) to be supported.

i) Server OS: Microsoft Windows Storage Server 64 bit (NAS optimised) (2008/2008R2 or latest)/ Equivalent UNIX/LINUX based NAS OS (latest version) with commercial Support.

j) Protocols Support: The Device should support iSCSI, HTTP, SNMP, CIFS, LINUX/UNIX (NFS).


n) IP Compatibility: All Hardware/Softwares to be IPv4 and IPv6 compliant with dual stack configurable, wherever applicable.

o) Functionality: NAS should function seamlessly with the Server, Video Recording and Management Software and Camera Softwares.

p) Operating Temp.: 40 deg centigrade (ambient) continuous operation.

q) All softwares licensed to MCL.

r) Installation: Complete installation/configuration with supply of suitable mountings, power supply/power injector/power adapter/power cable/patch cords and other accessories as required.
4. Specification of NAS (Minm.) : equipped with minimum 24 TB storage capacity in RAID -5 configuration

a) Rack Mounted with necessary accessories.

b) Processor: Intel Xeon.

c) RAM: 8GB DDR3 (Minm.), expandable to 12GB.

d) Network connectivity: Gigabit NICs- 2 Nos., with TCP/iSCSI offload capability.

e) Ports: USB2.0- Minimum 2 Nos, in addition to other System required Ports.

f) Hard Drive Slots: 8Nos. (minm.) For SATA II/SAS HDD (1TB/2TB/3TB/4TB), equipped with minimum 24 TB storage capacity in RAID -5 configuration with future expandability, hot swappable.

g) RAID:5 configuration.

h) Minm. 64Nos. Logical Unit Numbers (LUN) to be supported.

i) Server OS: Microsoft Windows Storage Server 64 bit (NAS optimised) (2008/2008R2 or latest),/ Equivalent UNIX/LINUX based NAS OS (latest version) with commercial Support.

j) Protocols Support: The Device should support iSCSI, HTTP, SNMP, CIFS, LINUX/UNIX (NFS).


n) IP Compatibility: All Hardware/Softwares to be IPv4 and IPv6 compliant with dual stack configurable, wherever applicable.

o) Functionality: NAS should function seamlessly with the Server, Video Recording and Management Software and Camera Softwares.

p) Operating Temp.: 40 deg centigrade (ambient) continuous operation.

q) All softwares licensed to MCL.

r) Installation : Complete installation/configuration with supply of suitable mountings, power supply/power injector/power adapter/power cable/patch cords and other accessories as required.
5. Specification of Video Management Server (Minimum):

a) Processor: Intel Xeon (Quad Core), 3GHz or above.

b) RAM: 16 GB ECC DDR3 upgradable to 24GB.


d) Audio: Integrated/External Audio with Mic & Speaker.

e) HDD: 300GB (Minm.) SATA: 2 Nos. in RAID-1 configuration.

f) Optical Drive: DVD R/W (latest version)

g) Network Interface: Dual 10/100/1000 Ethernet.

h) Other Interfaces: USB2.0: Minm. 4Nos (incl. two in the Front side) in addition to other System reqd./Common Ports.

i) Accessories: Optical Mouse, Keyboard (OEM).

j) Monitor: 24 inch (OEM/Renowned) Flat LCD/LED (1920*1200 resolution minm.).

k) O.S.: Win 2008 Server or latest version

l) Efficient Support to the functioning of the Video Recording and Management Software of the System.

m) Server Benchmark published in spec.org or, tpc.org.

n) IP: All Hardware/Softwares compatible to IPv4 and IPv6 compliant and Dual Stack configurable, wherever applicable.

o) Antivirus: Renowned latest Antivirus Suite

p) License: All Softwares to be Licensed to MCL.

q) Installation: Complete installation/configuration with supply of suitable mountings, power supply/power injector/power adapter/power cable/patch cords and other accessories as required.
6. Specification for Network Video Management Software:

1. Network Video Management Software (NVMS) to manage the Network/IP cameras should be supplied.

2. The software must be supplied with software license registration, software license certificate and instruction for registration. It shall be compatible with the IP network cameras supplied and work seamlessly for an effective monitoring and management software.

3. Proper management software shall be provided to make it easier to change the configuration and upgrade firmware version of the cameras campus wide.

4. It should meet batch configuration of IP cameras, batch upgrade of firmware, detect the power up/down of IP cameras and send alert.

5. The Video Surveillance solution should support high-resolution, Video Surveillance Cameras to capture Video.

6. The core component of the Video Surveillance solution should manage, store, and deliver video. It should support for encoding, distributing, managing and archiving video feeds.

7. The Video Surveillance Storage System can be in SAN/NAS/DAS formats. The storage system allows for secure and access video locally or remotely.

8. Viewing system authenticates and manages access to video feeds. It is a centralized tool for management of virtual matrixes, cameras, encoders, and viewers as well as for viewing network-based video.

9. The system should support open architecture and standards such as HTTP, RTP, RTSP, SNMP, SMTP, LDAP.

10. The VMS should allow operators to monitor and control the video in the command center and display of video feeds on multiple local and remote monitors.

11. It should have IP based transmission mechanism which should support video transmission working in union with the advanced features of the IP network infrastructure (switches, routers, and other networks security).

12. The system should be capable of recording at 25fps or higher and handle higher resolution (minimum of 2.0 Mega Pixels).

13. The VMS should have recording system capable of recording in MJPEG or MxPEG or H.264 or MPEG-4 format streaming camera at user defined frame rates.

14. The VMS should use Video Analytics (VA) on all the cameras except PTZ.

15. The VA essentials like Camera loss detection, Camera Obstructed / Moved, Video Motion Detection (VMD), Virtual fence, Wrong Direction, Multiple Alarm Area, Object removed in playback should be available.
16 Camera tampering analytics shall be enabled on all cameras. Alarms shall be generated in case of camera tampering.

17 The solution supplied shall have advance image correction & enhancement so has to see through Fog, Smog and Smoke.

18 The following functions shall be basic to the NVMS like failover for the Network video Recording Server or NAS for min of 10 minutes and shift over to alternate recording systems like FTP.

19 Should be provided with features like virtual guard tour, manual PTZ control, preset of alarm, automatic camera detection, centralized device management, uninterrupted configuration changes, event logging etc.

20 The NVMS shall have the user management based on Microsoft active directory and or local managements.

21 Shall support a virtual multi-site command center that integrates disparate sites into a single monitoring station.

22 Must be capable of supporting multiple monitoring stations with layered administrative override capability.

23 Shall show real-time geographic display of sites information like Camera locations and alarm conditions.

24 Shall provide integration of camera from multiple camera OEM.

25 Should give 2D Map view with the camera angle of view with different indication of video conditions.

26 Recordings should be schedulable on particular cameras at specified times. Each camera can have its own schedule, which can be configured for any time in the future.

27 Should have Application Programming Interface (API) to share information from other smart systems using an open architecture communication interface.

28 There should be no limit on number of cameras that can be added to the system and no additional license fee for such additions at a later date.

29 The NVMS shall support 100 camera from the time of commissioning of the system and shall be provided with such licenses to support 300 cameras with 10 simultaneous Client (View-station) License.

30 Should have facility for remote sharing of Video clips with other security forces personnel remote from the operations center through various kinds of media, including, handheld PDA, CD, DVD, and flash drives.

31 The NVMS software should be able to run on a COTS (commercial off the shelf) hardware server supporting Microsoft Windows operating system. The hardware specification has been provided in detail in the server specification section.

32 It should be a highly scalable, enterprise level software solution. It should offer a complete Video Surveillance solution that will be scalable from one to
hundreds of cameras that can be added as and when required. It should allow for seamless integration of third party security infrastructure where possible.

33 The software should provide automatic search and registration of components of proposed system on the network such as cameras, monitors, alarm panels, NVRs etc.

34 The system should allow for live view, playback and system configuration of the IP video system.

35 The system should allow for creation of multiple users and user groups and assign tasks to each.

36 It should be capable of showing video pane layouts including 2x2, 3x3, 4x4, 5x5, various Hot Spots (1+5, 1+7, 1+9, 1+12, 1+16) and custom layouts.

37 The software should be capable of monitoring the status of any camera in the network and should indicate when a device goes offline.

38 It should allow all cameras to be replayed simultaneously.

39 It should have facilities for play, forward, rewind, pause along with fast forward and rewind for reviewing the recorded videos.

40 The application should allow for time synchronized playback of different cameras together in the same video pane.

41 The system should be capable of recording 100 cameras simultaneously.

42. All should be both IPv4 and IPv6 compatible and dual stack configurable

43. The software should be ONVIF Compliant

44. Installation : Complete installation/ configuration as required

7. Technical Specification of Layer 3 Managed Switch:

i) Layer-3 Managed switch with full IPv6 support along with IPv4 & Dual Stack configurable.

ii) Port density:

a) 1000base-X SFP: 12 Nos.
   b) 10/100/1000 BaseT (RJ45): 12 Nos.
   c) 10G XFP/SFP+: 2 Nos (Ready, without Transreceivers).
   d) Dedicated Stacking port: 2 Nos with Modules and cables.

iii) Performance:
   a) Switching Fabric: 88 Gbps or better, non blocking.
   b) Forwarding Rate: 65 Mpps or better wire speed packet forwarding.
   c) Stacking Bandwidth: 40 Gbps/Switch or better.

iv) Features:

   a) At least 16000 MAC addresses.
   b) Supports 9 KB Jumbo frames.
c) 1000 Active VLANs (802.1Q), VLAN tagging.

d) Supports at least 8 Spanning Tree Groups/Instances.

e) IEEE (802.1D) STP, RSTP (802.1w), MSTP (802.1s).

f) IEEE 802.3ad LACP - Link Aggregation.

g) IEEE 802.1AB LLDP.

h) Static Routing and Dynamic Routing (RIP v1 & v2 Present) from Day 1.

i) Support OSPF, VRRP, ECMP.

j) Support for Multicast, PIM-SM, IGMPV1/V2, IGMP V3 Snooping.

k) IEEE 802.1p prioritization, DiffServ/COS.

l) Broadcast and Multicast Suppression.

m) ACLs/filters.

n) Support for Rate limiting/Queue Shaping.

o) Dynamic VLAN Assignment.

p) Guest VLAN Support.

q) DHCP Snooping, DHCP Relay for IPv4 and IPv6 (RFC-3315).

v) Quality of Service:

a) IEEE 802.1p Priority.

b) Diff. Serv Marking/Classification, DiffServ.

c) 8 Nos. QOS Queues per Port.

d) IPv6 traffic identification, prioritization, redirection.

vi) Security:

a) 802.1x port based network access control & Authentication Protocols.

b) RADIUS / TACACS+ Authentication support.

c) MAC Based Port limiting.

d) SSH Remote Login.

e) SSL (HTTPs).
f) ACLs.
g) SNMPv3.

vii) Management

a) Console Management Port on the front panel.
b) Web Based Management.
c) SNMP v1, v2 and v3 Support.
d) SSH v2 Support.
e) 4 Groups of RMON Support.
f) Telnet Support, TFTP.
g) USB Port / SD Memory card Socket.
h) Port Mirroring.
i) Industry Standard CLI with built-in Scripting tool.

     En 60825-1/2 / CE/FCC Part 15/CISPR22 Class A.
ix) Environmental Features: a) Operating Temp: 0-45 deg centigrade
    b) Humidity: 10-90% (non-condensing)
    c) Cooling fans.

x) Power Supply: - a) 100-230V AC, 50 c/s AC
    b) Hot swappable Redundant power supply unit/s.

xi) Installation: Complete installation/configuration with supply of suitable mountings, power supply/power injector/power adapter/power cable/patch cords and other accessories as required.


i) Layer 2 Managed Switch with IPv4, IPv6 and Dual Stack Configuration Support, 19” rack mounting.

ii) Port Density:

a) 10/100 BaseTX ports: 24 Nos with POE+ (802.3at) (backward POE 802.3af compatible).

b) 100FX/1000 BaseX SFP port: 2 Nos (without optical transceivers)

c) Stacking Ports: 2 Nos with modules.

iii) Performance:
a) 8.8 Gbps or higher switching capacity, non-blocking.

b) 6.5Mbps or better wire speed packet forwarding.

c) 20Gbps or better stacking bandwidth / switch with 8 or more switches per stack/virtual chassis.

IV) Features:

a) At least 8000 MAC Address

b) Upto 1000 Active VLANs and VLANs tagging (802.1Q).

c) 9KB Jumbo frame support.

d) IPV4, IPV6 and dual stack support.

e) IEEE 802.1D STP, 802.1s MSTP, 802.1w RSTP.

f) IEEE 802.3ad LACP.

g) IEEE 802.1AB LLDP.

h) At Least 8 spanning Tree Graphs/Instances support.

i) Static routing: Present

j) Support for RIP v1/v2, OSPF, VRRP with optional add-on license.

k) IGMP V1/V2/V3, IGMP snooping.

l) DHCP Support.

m) ICMPv6, SNTP/NTP.

n) Guest VLAN support.

o) BootP, DHCP Relay (RFC 2131).

V) QOS:

a) 802.1p prioritization.

b) Diff Serv Marking/Classification.

c) Four priority Queues.

VI) Management:

a) SNMP V1/V2/V3 Support.

b) SSHv2 and SSL (HTTPs).

c) RMON (4 Groups), Telnet, TFTP, MIBs Support.

d) Port mirroring.

e) Console and Telnet support.
f) Command line interface support with console port.

VII) Security:

a) 802.1x port based MAC Network access control
b) RADIUS, TACACS+ Authentication Support.
c) ACLs.
d) Broadcast storm control.
e) DHCP snooping.
f) Dynamic ARP Inspection.
g) SNMPv3.


En 60825-1/2 / CE/FCC Part 15/CISPR22 Class A

IX) Environ Features: a) Operating Temp : 0-50 deg centigrade

b) Humidity : 10-90% (non-condensing)
c) Cooling fans.

x) Power supply: a) 100-230V AC, 50Hz

b) Support for Redundant Hot Swappable Power Supply.

xi) Installation: Complete installation/ configuration with supply of suitable mountings, power supply/power injector/power adapter/power cable/patch cords and other accessories as required.
9. Technical Specification of L2 Switch, 24 Ports (10/100/1000 Base T) with POE and 4 nos. 1G SFP Uplink ports.

i) Layer 2 Managed Switch, 19" rack mounting.

ii) Port Density:
   a) 10/100/1000 BaseTX ports : 24 Nos with POE (minimum 4 nos ports with PoE+)
   b) 100FX/1000 BaseX SFP port : 4 Nos (without optical transreceivers)

iii) Performance:
   a) 56 Gbps or higher switching capacity, non-blocking.
   b) 41 Mpps or better wire speed packet forwarding.

IV) Features:
   a) At least 8000 MAC Address
   b) Upto 1000 Active VLANs and VLAN tagging (802.1Q).
   c) 9KB Jumbo frame support.
   d) IPv4, IPv6 and dual stack support.
   e) IEEE 802.1D STP, 802.1s MSTP, 802.1w RSTP.
   f) IEEE 802.3ad LACP.
   g) IEEE 802.1AB LLDP.
   h) At Least 8 spanning Tree Graphs/Instances support.
      i) Static routing Present
   j) Support for RIP v1/v2, OSPF, VRRP with optional add-on license.
   k) IGMP V1/V2/V3, IGMP snooping.
   l) DHCP Support.
   m) ICMPv6, SNTP/NTP.
   n) Guest VLAN support.
   o) BootP, DHCP Relay (RFC 2131).

V) QOS:
   a) 802.1p prioritization.
   b) Diff Serv Marking/Classification.
   c) Four priority Queues.

VII) Management:
   a) SNMP V1/V2/V3 Support.
   b) SSHv2 and SSL (HTTPS).
   c) RMON (4 Groups), Telnet, TFTP, MIBs Support.
   d) Port mirroring.
   e) Console and Telnet support.
   f) Command line interface support with console port.

VIII) Security:
   a) 802.1x port based MAC Network access control
   b) RADIUS, TACACS+ Authentication Support.
c) ACLs.
d) Broadcast storm control.
e) DHCP snooping.
f) Dynamic ARP Inspection.
g) SNMPv3.

En 60825-1/2 / CE/FCC Part 15/CISPR22 Class A

X) Environ Features :
a) Operating Temp : 0-50 deg centigrade
b) Humidity : 10-90% (non-condensing)
c) Cooling fans.

XI) Power supply :
a) 100-230V AC, 50Hz
b) Support for Redundant Hot Swappable Power Supply.
xii) Installation : Complete installation/ configuration with supply of suitable mountings, power supply/power injector/power adapter/ power cable/ patch cords and other accessories as required.
10. Technical Specification of Industrial grade managed L2 Switch:

i) Layer 2 Managed Switch, rack mounting.

ii) Port density:
   a) 10/100 Base Tx RJ 45 Ports with PoE: 8 Nos.
   b) 1000 Base SFP Port: 2 Nos. without Optical Transceivers.

iii) Features:
   a) MAC Address 8000.
   b) VLAN (802.1Q), VLAN Tagging, Port based VLAN.
   c) IEEE 802.1D STP, IEEE 802.1w RSTP.
   d) MAC based security, Port security, DHCP Server.
   e) IGMP auto configuration.
   f) 802.1p Priority queuing.
   g) Port mirroring, LLDP.
   h) SNMP V1/V2C/V3, Web, Telnet, CLI Support.
   j) TFTP Support.

iii) Industrial Features:
   a) Operating Temp: 0 to 60 deg centigrade minimum
   b) Operating Relative Humidity: 10 to 95% (non condensing)
   r) Installation: Complete installation/configuration with supply of suitable mountings, power supply/power injector/power adapter/power cable/patch cords and other accessories as required.
11. Media Converters with suitable fiber patch cords & other accessories as required

1. Copper to Fiber Media Convertor suitable for outdoor installation.
2. Media converter should be used to convert Ethernet port to fiber and vice versa. It should be of standard make.
3. Media Converters shall be 10/100 Base T to 100 Base-X converter and shall support half and full duplex operation.
4. Media Converter shall be able to work up to the required distance as specified (approx. distance is 2 KM). Electrical interface shall be Ethernet interface having RJ 45 type connector.
5. It shall work on power supply of 220 V AC nominal, 50 Hz with suitable adopter if required.
6. With suitable fiber patch cords & other accessories as required

12. 3 KVA Online UPS with SMF battery for 2 hour back up

1. Type: Online 3 KVA UPS.
3. Output Voltage: 220V-230V AC, 50C/S (Nominal), near Sine Wave, 0.8 or higher Lagging PF.
4. Harmonic Distortion: Output Harmonic Distortion within 3% of THD of Linear Load.
5. Crest Ratio: 3:1 or less
6. Output Socket: Minimum 6 Nos. 3/5 Pin 2.5A Socket.
7. Technology: Microprocessor Controlled.
8. Protection: Over Discharge of Battery, Overload Protection.
9. Indicators: LED/LCD/Analog Display/ indication for Mode of Operation Battery/Mains), Battery Status, Load Voltage / Current.
12. Battery Recharge Time/Rate: 8Hrs. (Typical) for 90%Charging. Charging Rate upto 5Amp (Minm.).
13. Transfer time from Mains to Battery: 0 ms.
15. Noise: Low noise (no perceptible noise beyond 1 m).
17. Rack Mount Design: 19” mountable with sliding guides or floor mount design
18. 24Hrs. working at 40 deg centigrade at 80% Load.
19. Management: SNMP supported.
20. Regulatory Approval: Approval for Safety/Radiation from CE/EN/UL/BIS or, any other from National/International recognized Agency.

13. 2 KVA Online UPS with SMF battery for 2 hour back up

1. Type: Online 2 KVA UPS.
3. Output Voltage: 220V-230V AC, 50C/S (Nominal), near Sine Wave, 0.8 or higher Lagging PF.
4. Harmonic Distortion: Output Harmonic Distortion within 3% of THD of Linear Load.
5. Crest Ratio: 3:1 or less
6. Output Socket: Minimum 6 Nos. 3/5 Pin 2.5A Socket.
7. Technology: Microprocessor Controlled.
8. Protection: Over Discharge of Battery, Overload Protection.
9. Indicators: LED/LCD/Analog Display/ indication for Mode of Operation Battery/Mains), Battery Status, Load Voltage / Current.
12. Battery Recharge Time/Rate: 8Hrs. (Typical) for 90% Charging. Charging Rate upto 5Amp (Minm.).
13. Transfer time from Mains to Battery: 0 ms.
15. Noise: Low noise (no perceptible noise beyond 1 m).
17. Rack Mount Design: 19” mountable with sliding guides or floor mount design
18. 24Hrs. working at 40 deg centigrade at 80% Load.
19. Management: SNMP supported.
20. Regulatory Approval: Approval for Safety/Radiation from CE/EN/UL/BIS or, any other from National/International recognized Agency.

14. 1 KVA ONLINE UPS WITH SMF BATTERY FOR TWO HOUR BACK UP

1. Type: Online1KVA UPS.
3. Output Voltage: 220V-230V AC, 50C/S (Nominal), near Sine Wave, 0.8 or higher Lagging PF (or higher).
4. Harmonic Distortion: Output Harmonic Distortion within 3% of THD of Linear Load.
5. Crest Ratio: 3:1 or less
6. Output Socket: Minm. 4 Nos. 3/5 Pin 2.5A Socket.
7. Technology: Microprocessor Controlled.
8. Protection: Over Discharge of Battery, Overload Protection.
9. Indicators: LED/LCD/Analog Display/ indication for Mode of Operation Battery/Mains), Battery Status, Load Voltage / Current.
12. Battery Recharge Time/Rate: 8Hrs. (Typical) for 90% Charging. Charging Rate upto 1Amp (Minm.).
13. Transfer time from Mains to Battery: 0 ms.
15. Noise: Low noise (no perceptible noise beyond 1 m).
16. 19 inch Rack Mountable, where required or floor mounted
17. 24Hrs. working at 40 deg centigrade at 80% load
18. Regulatory Approval: Approval for Safety/Radiation from CE/EN/UL/BIS or, any Other from National/International recognized Agency.
19. Suitable for smooth functioning with Switches of the system.
15. Client PC Work station with conventional LCD monitor

a) Processor: Intel Core i5
b) RAM: 8GB DDR3 Expandable.
c) HDD: 500GB SATA.
d) Optical Drive: DVD-R/W (latest Version)
e) Keyboard and Optical Mouse for PTZ Control and other purposes.
f) Port: 10/100/1000 Ethernet, 4USB2.0 Ports (incl. two in the Front side) and other Ports required for the System/Common ports.
g) Monitor: 24 inch Flat LCD/LED Display (1920*1200 resolution minm.).
h) OS: Windows 7 Professional or higher
i) IP: All Hardware and Software to be IPv4, IPv6 Compliant and Dual stack configurable, wherever applicable.
j) Antivirus: Latest renowned Antivirus Suite licensed to MCL.
k) License: All Softwares to be Licensed to MCL

16. Specification for Work Station for Surveillance Monitoring
a) Processor: Intel Core i7
b) RAM: 8 GB DDR3 Expandable.
c) HDD: 500GB SATA.
d) Optical Drive: DVD-R/W (latest Version)
e) Keyboard and Optical Mouse.
f) Port: 10/100/1000 Ethernet, 4USB2.0 Ports (incl. two in the Front side) and other Ports required for the System/Common ports.
g) Display Ports: Video Graphics Adopter suitable for 1 Nos. additional displays with HDMI ports with facility for showing different views simultaneously. (There will be up to two different views simultaneously in one displays and one Monitor).
h) Monitor: Minimum 18 inch Flat LCD/LED Display (1920*1200 resolution minm.).
i) OS: Windows 7 Professional or higher
j) IP: All Hardware and Software to be IPv4, IPv6 Compliant and Dual stack configurable, wherever applicable.
k) Antivirus: Latest renowned Antivirus Suite licensed to MCL.
l) License: All Softwares to be Licensed to MCL
17. Tech Specification of 40" Flat Panel LCD/LED Display (Minimum):

1. Type: LCD/LED Flat Panel Display
2. Screen Size Class: 40” diagonal or higher
3. Aspect Ratio: 16:09
4. Resolution: 1920*1080
5. Contrast Ratio: 3000:1 (Minm.)
6. No. of Colours: 16.7 Million
7. Response Time: 8ms or less
8. Viewing Angle: 178 deg H * 178 deg V (minimum)
10. Suitable Audio Input connector
11. Speaker: Stereo
13. Remote Control: Yes
15. Voltage: 220V AC, 50C/s (Nominal)
16. Energy Star Qualified: Yes
18. Continuous (24/7) Operation: Yes
19. Cords for Connectivity: All OEM supplied cords and any additional cord required for the System Functioning/connectivity, to be supplied.

18. Technical Spec. for Speakers, Mic & Alarms

i) Speakers:

Suitable & compatible for the system as required
To be supplied with suitable cable and accessories as required

ii) MIC:

Suitable & compatible for the system as required
To be supplied with suitable cable and accessories as required

iii) Alarms:

Suitable & compatible for the system as required
To be supplied with suitable cable and accessories as required
19. 12 core outdoor armoured, 9/125 single mode optical fiber cable.

i) Single Mode, indoor/Outdoor Type, Corrugated Steel Armoured, Water blocked, Loose Tube sheathed Fiber Cable.


iii) Attenuation: 1310nm: $\leq 0.4 \text{dB/Km}$. 1550nm $\leq 0.3 \text{dB/Km}$.


v) Gigabit Ethernet Length: 500m (Minm.).

vi) Mode Field Dia.: 9um +/- 10%.

vii) Cladding Dia.: 125 +/- 1um.

viii) Coating Dia.: 245 +/- 10um.


xi) Maxm. Tensile Strength, Short Term: $\geq 1000 \text{N}$.

xii) Maxm. Crush Resistance Short Term: $\geq 500 \text{N}$.

xiii) Bending Induced Attenuation 100 Turn 75mm dia.(1550nm): 0.5dB

xiv) Minm. Proof Strength: 100Kpsi.

xv) Operating Temp.: upto 70 Deg. C.

xvi) Jacket Flame retardant, UV protected.

xvii) UL Listed/Product Specific Quality Certification from any recognized National/International Agency.

xviii) TIA Color coded Fibers.

XVIV) No. of cores: 12

20. Cat 6 UTP Cable, 305 meter roll

i) Cat6 UTP Cable 4 Pair, 23AWG.

ii) Complies ANSI/TIA/EIA-568-B.2-1 standard, ETL Verified.

iii) UL Listed/Product Specific Quality Certification from any recognized National/International Agency.

iv) Conductor: Solid Copper.

v) Insulation: Polyolefin/Polyethylene.

vi) Jacket: PVC.

vii) Internal Separator, Rip Cord.

viii) Outer Diam: 6mm (Nominal).

ix) Impedance: 100 Ohm (Nominal).

x) DC Resistance: 6.7 Ohm (nominal).

xi) Operating Frequency: upto 400 MHz (minm.)

xii) Non-perishable Length Marking on Jacket.

xiii) Length/Reel: 305m (nominal).

xiv) Temp. Range: 5 to 60 Deg. Centigrade.

xv) Cable Installation Warranty of one Year against Workmanship by the Contractor.

21. STP (Shielded Twisted Pair) CAT-6 Cable

STP (Shielded Twisted Pair) CAT-6 cable should be of 4 pair of 23 AWG solid bare copper (diameter 0.226 mm) with polyethylene Insulation and PVC Jacket and should comply following minimum specifications.


iii. Capacitance: 5.6 nf/Km (nominal).

iv. Voltage: 300 VAC or DC.

v. Propogation delay: 536 ns/100m @ 250Mhz.

vi. Velocity of Propogation: 69%.

vii. Bend Radius: Approximately 1”
22. Cat 6 Jack Panel/ Patch panel (24 port)/(12 port), face plates, outlets, patch cords, I/O box etc.

**UTP Jack Panel:**

1. ANSI/TIA/EIA-568-B.2-1 Cat 6 component compliant.
2. Gigabit Ethernet supported.
3. 24 Port/12 port Configuration with Powdered Coated finish.
4. Allow at least 200 re-terminations without signal degradation.
5. Have Port Identification numbers on the front of the Panel.
6. Each Port/Jack on the Panel should be individually removable at field from the Panel.
7. Minm. 750 insertion cycles.
9. Integrated rear Cable Manager.

**UTP Accessories:**

All other UTP accessories e.g. Cords, Face Plate, Information Outlet etc. should comply to ANSI/TIA/EIA-568-B.2-1 Cat6 Component wherever applicable.

23. Fiber LIU/ Patch panel (24 port)/(12 port) face plates, pig tails, patch cords, couplers, connectors, splicing box etc.

All OFC accessories including Rack Mounted Patch Panels, Cord, Pigtails etc. should satisfy relevant standards applicable and conforming to the requirements. The following parameters are also to be followed:

A. Fiber LIU/ Patch Panel (24 Port):

a) 1U/2U 19 inch Rack Mountable 24 Port Patch Panel.
b) Integrated Management rings for orderly excess cable storage while maintaining minimum. Bend radius.
c) Port Caps for unused ports.
d) Pullout/sliding drawer.
e) Fully loaded with suitable connectors / couplers and accessories

B. Fiber LIU/ Patch Panel (12 Port):

a) 1U/2U 19 inch Rack Mountable 12 Port Patch Panel.
b) Integrated Management rings for orderly excess cable storage while maintaining minimum. Bend radius.
c) Port Caps for unused ports.
d) Pullout/sliding drawer.
e) Fully loaded with suitable connectors / couplers and accessories

C. Pigtails:

a) 9/125 um Single Mode Fiber.
b) Length 1m -2m (as required for healthy cable management).
c) Compatible for fusion or mechanical splicing.
d) Insertion loss: 0.35db (max).
e) Op. Temp.: upto 60 Deg.C.

D. OFC Patch Cords:
a) Single Mode 9/125 um Fiber with ceramic Ferrule.
b) Length: 2m/3m/5m combination, as required.
c) Complete with suitable connectors/ couplers

24. 12 U Rack with accessories:

i. Lightweight, lockable, wall mount, tinted and toughened glass Front Door.
ii 500mm Depth, 19 inch Robust frame structure.
iii Top & Bottom cover with cable entry provision.
iv 1 No. AC Mains Horizontal Channel 5 * 5A.
v 19 inch 1U Cable Manager.
vi 1 No. Shelve Tray
vii All required accessories for standard installation.

25. 27 U Floor Mount Rack:

i. Lockable, Front Glass (tinted & toughened) Door, Rear perforated MS Door,
ii. Aluminium extruded frame (incl. depth support member locked with width support member), chromate treated and epoxy powder coated.
iii. Removable side Panels
iv. CNC Vent Holes for proper ventilation.
vi. Cable Entry Provision at Top and Bottom
vii. Minm. Rack Depth 600mm
viii. 19" Width Cable Manager of height 1U in each Rack.
ix. 1 No. Vertical AC Mains Channel (8*5A).
x. 1 No. Fan Tray with 2 Nos. 230V AC 90CFM Fan.
xii 4 Nos. Shelve Tray.
xiii. Castor & Brake
xiv. All required accessories for standard installation.

26. Technical Spec of Armoured Power Cable (3 core armoured, 1.5 sq mm):

Power Cable 3 Core, 1.5 sq mm, multi strand copper conductor, PVC insulated, Armoured, confirming to IS : 7098 (Pt-1) 1988 shall be provided

27. Tech Spec for PVC Pipe:

1. ISI Marked/ASTM D-1785

28. Tech Spec for HDPE Pipe:

1. 32mm (nominal) dia, ISI Marked/IS:4984-85.
Meets TEC spec GR/CDS-08/2 and/or, ISI Marked(IS:4984-85).

29. GI Pipe:

1. ISI Marked/IS:1239 (Part I)
30. Technical Specification of Tubular Steel Poles:

Tubular Steel Poles for camera mounting

31. Technical Specification for Chemical Earthing:

Maintenance free Chemical Earthing Systems to be installed at identified places with following minm. Specifications:

i) Maintenance Free.
ii) Earth Resistance one Ohm or less round the year.
iii) Earth pit size:5 ft * 5ft * 10ft * (Minm).
iv) The System will have one central highly galvanized mild steel solid conductor inside a highly galvanized mild steel pipe with crystalline, highly conductive, anticorrosive mixture in the space between as follows:
   a) The Earthling Electrode structure will be surrounded by highly conductive, non-corrosive, non-soluble (in water), high moisture absorbing capacity, packing material. The pit on being filled up should be air pocket-free with low resistivity.
   b) The Earthing System should conform to standard IS: 3043:1987 or, later modified version, if any.
   c) The System will have suitable arrangement for low resistance mechanically strong joints for connection of the earth electrode with the earth conductor leading to a Central Junction Point from where it will be distributed to the Devices/Sub-Systems.
   d) The earth conductor will be of suitable gauge/quality (Minm. 4 sq mm) and suitably terminated with less than 0.5 ohm DC resistance upto 100mtrs.
   e) Normally there will not be any joint in the earth conductor other than at distribution point. Any joint, if indispensable, must have same or better conductivity and mechanical strength as the original.
   f) The Earth Conductor should not have any sharp Bend.

32. Installation & Commissioning

System Engineering, Installation & Integration of all equipments, commissioning, testing, trial run, training etc. Any additional/unforeseen item, accessories and related jobs necessary for completion of the installation, testing & commissioning as per scope of work as required, even if not specifically mentioned in BOQ/NIT, will be provided by the successful bidder without any extra cost.

***************
TECHNICAL COMPLIANCE SHEET

(UNDERTAKING TO BE SUBMITTED BY OEM FOR EACH ITEM SEPARATELY)

(REQUIRED TO BE SUBMITTED ONLY FOR CAMERAS/VIDEO MANAGEMENT SOFTWARE, NETWORK/LAN SWITCHES, SERVER & NAS)

REF : NIT NO. Date

Tender_ID:

Description of Item :

Sr. No. of the Item in the BOQ :

Make :

Model:

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<th>Sr.</th>
<th>Required Technical Specification, as per NIT (point wise)</th>
<th>Complied (Yes/No)*</th>
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*Note: Undertaking is to be given in the form of Yes or No. Any other entry will be ignored.

NAME & DESIGNATION OF THE SIGNATORY WITH RUBBER STAMP

This undertaking should be typed & signed by a person not below the rank of Account Manager or equivalent of the OEM on their Letter Pad.
GENERAL TERMS AND CONDITIONS

1. Definitions

i) "Employer" or "Company" means the Coal India Limited or any of its subsidiaries who will employ the contractor represented by the appropriate authority.

ii) "Principal Employer" means the Coal India Limited or any of its subsidiaries or the officer nominated by the Company to function on its behalf.

iii) The word "Contractor/ Contractors" wherever occurs means the successful tenderer/tenderers who has/have deposited the necessary Earnest money and has/have been given written intimation about the acceptance of tender and shall include legal representative of such individual or persons composing a firm or a company or the successors and permitted assignees of such individual, firm or Company, as the case may be.

iv) "Site" means the land and places including any building and erection thereon, over, under, in or through which the Permanent works or Temporary works designed by the Engineer in Charge are to be executed and any other lands and places provided by the Employer for working space or any other purpose as may be specifically designated in the Contract as forming part of the site.

v) The term "Sub-Contractor" as employed herein, includes those having a direct contract with Contractor either on piece rate, item rate, time rate or any other basis and it includes one who furnishes work to a special design according to the plans or specifications of this work but does not include one who merely supplies materials.

vi) "Accepting Authority" shall mean the management of the company and includes an authorized representative of the company or any other person or body of persons empowered in this behalf by the company.

vii) "Engineer-in-charge" shall mean the officer nominated by the company who is competent to direct supervisors and authorised to be in charge of the works for the purpose of this contract. The Engineer in Charge /Designated Officer in Charge who is of an appropriate seniority, will be responsible for supervising and administering the contract, certifying payments due to the contractor, valuing variations to the contract, awarding extension of time and valuing compensation events. The Engineer in Charge /Designated Officer in Charge may further appoint his representatives i.e. another person/Project Manager or any other competent person and notify to the contractor who is directly responsible for supervising the work being executed at the site, on his behalf under their Delegation of Powers of the company. However, overall responsibility, as far as the contract is concerned, will be that of the Engineer in Charge/Designated Officer in Charge.

viii) The "Contract" shall mean the notice inviting tender, the tender as accepted by the Company, the work order issued to the contractor, and the formal contract agreement executed between the company and the contractor together with the documents referred to therein including general terms and conditions, special conditions, if any, scope of work, frozen terms & conditions/technical parameters/scope of work and revised offer, if any, specifications, drawings, including those to be submitted during progress of work, schedule of quantities with rates and amounts.
ix) A "Day" shall mean a day of 24 hours from midnight to midnight.

x) The "Work" shall mean the works required to be executed in accordance with the contract/work order or parts thereof as the case may be and shall include all extra or additional, altered or substituted works or any work of emergent nature, which in the opinion of the Engineer-in-charge, become necessary during the progress of the works to obviate any risk or accident or failure or become necessary for security.

xi) "Schedule of Rates" referred to in this conditions shall mean the standard schedule of rates prescribed by the company and the amendments issued from time to time.

xii) "Contract amount" shall mean:

   a) in the case of turnkey contracts the total sum for which tender is accepted by the company.

   b) in the case of other types of contracts the total sum arrived at based on the individual rates quoted by the tenderer for the various items shown in the "Schedule of Quantities" of the tender document as accepted by the Company with or without any alteration as the case may be.

xiii) "Written notice" shall mean a notice or communication in writing and shall be deemed to have been duly served if delivered in persons to the individual or to a member of the contractors firm or to an office of the company for whom it is intended, or if delivered at or sent by registered mail to the last business address known to him who gives the notice.

xiv) "The constructional plant" means all appliances, tools, plants or machinery or whatsoever nature required in or about the execution, completion or maintenance of the works but does not include materials or other things intended to form part of the permanent work.

xv) "Letter of Acceptance of Tender" means letter giving intimation to the tenderer that his tender has been accepted in accordance with the provisions contained in that letter.

xvi) "Department" means the E&T Department of Coal India Limited or any of its subsidiary companies/units represented by the appropriate authority.

xvii) "Act of insolvency" means as it is designed by Presidency Town Insolvency Act or Provincial Insolvency Act or any act amending such originals.

xviii) The words indicating the singular only also include the plural and vice-versa where the context so requires.
2. **Contract Documents:**

The following documents shall constitute the contract documents:

i) Notice Inviting Tender/Detailed Tender Notice.

ii) Articles of Agreement / Letter of Acceptance of Tender/ Work Order.


iv) Additional Terms & Conditions of contract, if any.

v) Specifications.

vi) Schedule of quantities (or Bill of Quantities)/ Schedule of work/ Scope of work and schedule of deviation *(to be provided by the contractor.)*

vii) Frozen terms & conditions / technical parameters/ scope of work and revised offer, if any.

viii) Contract drawings and work programme.

ix) Safety Code etc. forming part of the tender.

**N.B. Deviations:**

Deviations sought by the bidders, whether they are technical or commercial deviations, must only be given in the schedules prescribed for them. Any willful attempt by the bidders to camouflage the deviations by giving them in the covering letter or in any other documents than the prescribed schedules may render the bid itself as non-responsive.

2.1 The contractor shall enter into and execute contract agreement in the prescribed form (ref. format at ANNEXURE VII). The cost of the stamp papers for the contract agreement shall be borne by the contractor. Two sets of contract document/agreements shall be prepared and signed by both the parties One of the sets shall be stamped "Original" and the other "Duplicate". The duplicate copy will be supplied to the contractor free of cost and the original is to be retained by the company. For any additional copies required by the contractors the price to be charged would be that of the cost of the Tender Document (Application Fee).

All additional copies should be certified by the Engineer in Charge.

The contractor shall keep copy of these documents on the site/place of work in proper manner so that these are available for inspection at all reasonable times by the Engineer-in-charge, his representatives or any other officials authorised by the company for the purpose.

2.2 The contract document shall not be used by the contractor for any purpose other than this contract & the contractor shall ensure that all persons employed for this contract strictly adhere to this and maintain secrecy, as required of such documents.
2.3 Tender Evaluation & Bid Assessment:

If the bid of the successful bidder is seriously unbalanced in relation to the estimate of the cost of work to be performed under the contract, the company may require the bidder to produce detailed price analysis for any or all items of the Bill of quantities to demonstrate the internal consistency of these prices with the construction method and the schedule proposed. After evaluation of the price analysis, the company may require that the amount of the performance security/security deposit is increased at the expense of the successful bidder to a level sufficient to protect the company against financial loss in the event of default on the part of the successful bidder under the contract.

2.4 Abnormally High Rate (AHR) & Abnormally Low Rate (ALR) Items.

Abnormally High Rates & Abnormally Low Rates, if quoted by the contractor, in item rate tenders will be identified & dealt with as under:

i) For identification of AHR & ALR items the ceiling of +/- 20% respectively, when compared with the updated estimated rate, will be considered.

ii) Variation in Quantity on quoted rate during execution for AHR & ALR items shall be permitted up to +/-25% (+25% for AHR & -25% for ALR) of the quantity provided for items of work below plinth level & +/- 5% of the quantity provided for items of work above plinth level respectively.

iii) Quantity variation beyond the limit mentioned at ii) above shall be dealt by arriving at new rate based on prevalent market rates of materials & labour analysed as per standard analysis of rate of N.B.O./ C.P.W.D. Payment of extra quantity over the permitted quantity of +/-25% and +/-5%(as the case may be) would be made on the basis of the new analysed rate.

iv) For identified abnormally low rate (ALR) items, the contractor will be required to deposit with the company the difference in amount calculated between the departmental justified rate multiplied by the quantity of a particular ALR item and the ALR rate quoted by the contractor multiplied by the quantity of the same item.

The total amount to be deposited will be the sum total of all the identified ALR items calculated as per the method outlined above.

The amount so retained will be refunded on successful completion of individual ALR items of work.

2.5 Negotiations:

Negotiations will be held only if the lowest rate received is not reasonable and the decision of the company regarding reasonableness of rates quoted will be final & binding on the bidders.

Work will be awarded to the lowest bidder (L1) without post tender negotiations if the rates are reasonable.

If rates are not reasonable, negotiations with L1 only may be undertaken to arrive at a reasonable rate.
2.6  Acceptance of Offer:

Letter of Acceptance is an acceptance of offer by the company.

2.7  Banned or delisted Contractors:

The bidders would give a declaration that they have not been banned or delisted by any Govt. or Quasi Govt. agencies or PSU’s. If a bidder has been banned or delisted by any Govt. or Quasi Govt. agencies or PSU’s this fact must be clearly stated and it may not necessarily be a cause for disqualification. If the declaration is not given, the bid will be rejected as non-responsive.

3.  Discrepancies in contract documents & Adjustments thereof

The documents forming part of the contract are to be treated as mutually explanatory of one another and in case of discrepancy between schedule of quantity, the specifications and/or drawing, the following order of preference shall be observed:

a)  Description in Bill of Quantities of work.
b)  Particular specification and special conditions, if any
c)  Drawings.
d)  General specifications.

3.1  In the event of varying or conflicting provision in any of the document(s) forming part of the contract, the Accepting Authority’s decision/clarification shall hold good with regard to the intention of the document or contract as the case may be.

3.2  Any error in description, quantity or rate in Bill of Quantities or any omission there from, shall not vitiate the contract or release the contractor from discharging his obligations under the contract including execution of work according to the Drawings and Specifications forming part of the particular contract document.

3.3  Any difference detected in the tender/ tenders submitted resulting from:

a)  discrepancy between description in words and figures, the rate which corresponds to the amount worked out by the contractor shall be taken as correct.

b)  discrepancy in the amount quoted by the contractor due to calculation mistake of the unit rate and quantity, the unit rate shall be regarded as firm and amount corrected.

c)  discrepancy in totaling or carry forward in the amount quoted by the contractor shall be corrected.

The tendered sum so corrected and altered shall be substituted for the sum originally tendered and considered for acceptance instead of the original sum quoted by the tenderer alongwith other tender/tenders. Rounding off to the nearest rupee should be done in the final summary of the amount instead of in totals of various sections of the offer.
4. Security Deposit:

4.1.1 Security Deposit shall consist of two parts:
   a) Performance security to be submitted at award of work and
   b) Retention Money to be recovered from running bills.

The security deposit shall bear no interest

4.1.2 Performance Security should be 5% of contract amount and shall be submitted within 28 days of receipt of LOA by the successful bidders in any of the form given below
   - a Bank Guarantee, for Rs 5.00 Lakhs and above, in the form given in the bid document
   - Govt. Securities, FDR or any other form of deposit stipulated by the owner
   - Demand Draft drawn in favour of Mahanadi Coalfields Ltd. on any Scheduled Bank payable at its Branch at Sambalpur.

The Earnest Money/Bid Security deposited in the form of Bank Guarantee shall be discharged when the Bidder has signed the Agreement and furnished the required Performance Security/Security Deposit. The bid security deposited in the form of Demand Draft/cash/Online Payment shall be adjusted against the security deposit. If performance security is provided by the successful bidders in the form of bank guarantee it shall be issued either –
   - a) at Bidder's option by a nationalized/Scheduled Indian Bank or by a foreign bank located in India and acceptable to the employer, subject to the condition that Bank Guarantees issued by outstation Banks shall be operative at their Sambalpur Branch of Odisha, India.
   - b) the validity of the Bank Guarantee shall be atleast ninety days beyond the period of contract. The period of contract for this purpose is (Design, Supply, Installation, Testing, Trial Run and Commissioning period 4 months + warranty period one year + AMC period 5 years) = 6 years 4 months = 76 months. Hence the validity Bank Guarantee shall be for a period of 76 months + 3 months = 79 months from the date of agreement.
   - c) No extension of Bank Guarantee for a period of less than 3(Three) months shall be accepted.

Failure on the part of Contractor to comply with the above provision, shall render the award of work liable for cancellation with forfeiture of bid security.

4.2.1 All running on account bills shall be paid at 95% (ninety five percent) of work value (excluding Service tax, if any). This 5% (five percent) deduction towards Retention Money will be the second part of security deposit.

4.2.2 The 5% Performance Security Deposit & the 5% Retention money will be refunded after successful completion of the five year AMC period. Retention Money should be deducted at 5% from running bills.

The Bank Guarantee towards security deposit shall be acceptable only for values Rs.5,00,000/- and more, and the Bank Guarantee shall also be valid for a minimum period of atleast ninety days beyond the period of contract. Bank guarantee is to be submitted in the format prescribed by the company. The period of contract for this purpose is (Design, Supply, Installation, Testing, Trial Run and Commissioning period 4 months + warranty period one year + AMC period 5 years) = 6 years 4 months = 76 months. Hence the validity Bank Guarantee shall be for a period of 76 months + 3 months = 79 months form the date of agreement.

4.3 Bank guarantee shall be irrevocable.

4.4 The Company shall be at liberty to deduct/appropriate from the security deposit such sums as are due and payable by the contractor to the company as may be determined in terms of the contract, and the amount appropriated from the security deposit shall have
to be restored by further deduction from the contractors subsequent on account running bills, if any.

The refund of security deposit shall be subject to company's right to deduct/ appropriate its due against the contractor under this contract or under any other contract.

4.5 " The 5% Performance Security Deposit & the 5% Retention money will be refunded after successful completion of the five year AMC period "

5. Deviations/Variations in Quantities and Pricing

The quantities given in the "Schedule of Quantities" are based on estimates and are meant to indicate the extent of the work and to provide a uniform basis for tendering and any variation either by addition or omission shall not vitiate the contract.

5.1 The company through its Engineer In Charge or his representative shall, without radically changing the original scope and nature of the work, under contract, have power to make any alterations in or additions to or substitution of the original specifications, drawings, designs and instructions that may appear to be necessary or advisable during the progress of the work.

The contractor shall be bound to carry out the works in accordance with the instructions given to him in writing by the Engineer In Charge or his representative on behalf of the company. Such altered or additional or substituted work, which shall form part of the original contract, shall be carried out by the contractor on the same terms and conditions in all respects on which they agreed to do the main work and at the same rate/rates as are specified in the contract/ work-order.

5.2 The right is reserved to cancel any items of work included in the contract agreement or portion thereof in any stage of execution if found necessary to the work and such omission shall not be a waiver of any condition of the contract nor invalidate any of the provisions thereof.

5.3 If the additional, altered or substituted work includes any class of work for which rate/rates is/are not specified in the contract/work order, rates for such items shall be determined by the Engineer In Charge as follows:

a) In the case of percentage tenders, if the rate for the item of work executed is available in the company's approved SOR, it will be paid at the schedule rate plus or minus the accepted percentage as per contract,

b) In case of item rate tenders, the rate for extra item shall be derived from the rate for similar item or near similar item of work available in the agreement schedule of work or by analysis of rates as at (c) below and the lower rate out of the above two shall be considered.

c) In case the rate for extra item is to be derived by analysis of rate, the same shall be done by analysis on prevalent market rate of materials and labour based on standard norms of analysis of rate of N.B.O./C.P.W.D.

d) In case of combined tender with partly item rate for non-schedule items & partly percentage tenders for SOR items, the rate for extra item shall be derived as at (b) above in case of non-schedule items rates and in case of percentage rates for SOR items the rate for extra item shall be derived as at (a) above.
In case of any difference between the contractor and the Engineer-In Charge as to the fixation of rates, the matter shall be referred to the accepting authority of the company i.e. GM(E&T) of the company, whose decision shall be final and binding on the contractor.

5.4 Payment for such deviated items (additional/ altered / substituted items of work or excess quantities of work beyond +/- 25% of the agreement schedule) shall be made in the contractors running on account bills, till the revised estimate regularising these items are sanctioned by the competent authority of the company, at the provisional rates and shall not exceed:

   a) 75% of the rate recommended by the Engineer In Charge to the accepting authority of the company i.e. GM(E&T) of the company, if the rate is directly available in the SOR of the company.

   b) 50% of the rate recommended by the Engineer In Charge to the accepting authority of the company, i.e. GM(E&T) of the company, if it is analyzed item rates based on prevalent market rates of materials and labour following NBO/CPWD norms.

5.5 The time for completion of the originally contracted work shall be extended by the company in the proportion that the additional work (in value) bears to the original contracted work (in value) plus 25% of the time calculated as explained above or such further additional time as may be considered reasonable by the Engineer in Charge.

5.6 The company through its Engineer In Charge or his representative, on behalf of the company, shall have power to omit any part of the work in case of non-availability of a portion of the site or for any other reason and the contractor shall be bound to carry out the rest of the work in accordance with the instructions given by the Engineer In Charge. No claim from the Contractor shall be entertained/ accepted on these grounds.

5.7 In the event of any deviation being ordered which in the opinion of the contractor changes radically the original scope/nature of the contract, the contractor shall under no circumstances suspend the work, either original or altered or substituted, and the dispute/disagreement as to the nature of deviation and the rate/rates to be paid for such deviations shall be resolved separately with the company as per the procedures/ norms laid down hereafter.

6. Time for Completion of Contract, Extension thereof, Defaults and Compensation for Delay

   Time is the essence of the contract and as such all works shall be completed within the time stipulated in the contract/ work order.

   Immediately after the contract is executed/the work order is issued, the Engineer In Charge and the contractor shall agree upon a detailed time and progress chart prepared based on BAR CHART/ PERT CPM techniques on the basis of a construction schedule submitted by the contractor at the time of executing contract showing the order in which the work is proposed to be carried out within the time specified in the contract document/work order. For the purpose of this detailed time and progress chart, the work shall be deemed to have commenced from next day of execution of agreement.
6.1 If the contractor, without reasonable cause or valid reasons, commits default in commencing the work within the aforesaid time limit, the company shall without prejudice to any other right or remedy, be at liberty, by giving 15 days notice in writing to the contractor to commence the work, to forfeit the Earnest Money deposited by him and to rescind the Letter of Acceptance of Tender/Work Order.

Additionally, the Company will reserve the right to debar such defaulting Contractors from participating in future Tenders for a minimum period of 1 (One) year.

6.2 If the contractor fails to maintain the required progress in terms of the agreed time and progress chart or to complete the work and clear the site on or before the contract or extended date of completion, he shall without prejudice to any other right or remedy available under the law to the company on account of such breach, pay as compensation (Liquidated Damages) @ half percent (1/2%) of the contract price per week of delay. The aggregate of such compensation/compensations shall not exceed 10(ten) percent of the total value as shown in the contract.

This will also apply to items or group of items for which separate period of completion has been specified. The amount of compensation may be adjusted or setoff against any sum payable to the contractor under this or any other contract with the company.

6.2.1 The company, if satisfied, that the works can be completed by the contractor within a reasonable time after the specified time of completion, may allow further extension of time at its discretion with or without the levy of L.D. In the event of extension granted being with L.D, the company will be entitled without prejudice to any other right or remedy available in that behalf, to recover from the contractor as agreed damages equivalent to half percent of the contract value of the works for each week or part of the week subject to a ceiling of 10% of the contract price.

6.2.2 The company, if not satisfied that the works can be completed by the contractor, and in the event of failure on the part of the contractor to complete work within further extension of time allowed as aforesaid, shall be entitled, without prejudice to any other right, or remedy available in that behalf, to rescind the contract.

6.2.3 The company, if not satisfied with the progress of the contract and in the event of failure of the contractor to recoup the delays in the mutually agreed time frame, shall be entitled to terminate the contract.

6.2.4 In the event of such termination of the contract as described in clauses 6.2.2 or 6.2.3 or both the company, shall be entitled to recover L.D. upto ten percent (10%) of the contract value and forfeit the security deposit made by the contractor besides getting the work completed by other means at the risk and cost of the contractor.

6.3 a) The company may at its sole discretion, waive the payment of compensation on request received from the contractor indicating valid and acceptable reasons if the entire work is completed within the date as specified in the contract/work order or as validly extended date without stipulating any compensation for delay. or

b) If the progress of the work or of any portion of the work is unsatisfactory, the Engineer In-charge shall be entitled, after giving the contractor 15 days' notice in writing, to employ another Agency for executing the job or to carry out the work departmentally either wholly or partly debiting the contractor with the cost involved in engaging another Agency or the cost involved in executing the work departmentally, as the case may be. The certificate to be issued by the Engineer In-charge for the cost of the work so done shall be final and conclusive and the extra cost, if any, shall be borne by the contractor.
6.4 Extension of date of completion: On occurrences of any events causing delay as stated here-under, the contractor shall intimate immediately in writing to the Engineer In Charge.

a) Force Majeure:
   i) Natural phenomena, including but not limited to abnormally bad weather, unprecedented flood and draught, earthquakes & epidemics.
   ii) Political upheaval, civil commotion, strikes, lockouts, acts of any Govt. (domestic/foreign) including but not limited to war, proprietary, quarantine embargoes

The successful bidder/contractor will advise in the event of his having to resort to this clause by a registered letter duly certified by the local chamber of commerce or statutory authorities, the beginning and end of the cause of delay, within fifteen days of the occurrence and cessation of such Force Majeure condition.

In the event of delay due to Force Majeure for more than one month the contract may be terminated at the discretion of the company. Termination under such circumstances will be without any liability on either side.

b) Serious loss or damage by fire

c) Non-availability of stores which are the responsibility of the company to supply as per contract

d) Non-availability of working drawings in time, which are to be made available by the company as per contract during progress of the work

e) Delay on the part of the contractors or tradesmen engaged by the company not forming part of the contract, holding up further progress of the work

f) Non-availability or breakdown of tools and plant to be made available or made available by the company

g) The execution of any modified or additional items of work or excess quantity of work.

h) Any other causes which, at the sole discretion of the company, is beyond the control of the contractor.

6.4.1 A HINDRANCE REGISTER shall be maintained by both department and the contractor at site to record the various hindrances, as stated above, encountered during the course of execution.

Hindrance register will be signed by both the parties. The contractor may also record his observations in the Hindrance Register. In case the contractor has a different opinion for hindrance and a dispute arises then the matter would be referred to the EIC and or the next higher authority whose decision would be final & binding on the contractor & the decision to be communicated within 15 days.

6.4.2 The contractor shall request the company in writing for extension of time within 15 days of happening of such event causing delay stating also, the period for which extension is required. The company may, considering the genuinity of the request, give a reasonable extension of time for completion of the work. Such extension shall be communicated to the contractor in writing by the company through the Engineer In Charge within 1(one) month of the date of receipt of such request.
6.4.3 The opinion of the Engineer-in-charge, whether the grounds shown for the extension of time are or are not reasonable, is final. If the Engineer-in-charge is of the opinion that the grounds shown by the contractor are not reasonable and declines to the grant of extension to time, the contractor can not challenge the soundness of the opinion by reference to arbitration.

The opinion of the Engineer-in-charge that the period of extension granted by him is proper or necessary is not, however, final. If the contractor feels that the period of extension granted is inadequate he can appeal to the GM(E&T) of the company for consideration on the question whether the period of extension is or is not proper or necessary.

6.4.4 Provisional extension of time may also be granted by the Engineer In Charge during the course of execution, on written request for extension of time within 15(fifteen) days of happening of such events as stated above, reserving the company's right to impose/ waive penalty at the time of granting final extension of time as per contract agreement.

6.4.5 When the period fixed for the completion of the contract is about to expire, the question of extension of the contract may be considered at the instance of the Contractor or the Department or of both. The extension will have to be by party's agreement, express or implied.

In case the contractor does not apply for grant of extension of time within 15(fifteen) days of the hindrance occurring in execution of the work and the department wants to continue with the work beyond the stipulated date of completion for reason of the work having been unavoidably hindered, the Engineer-in-charge can grant extension of time even in the absence of application from the contractor. Such extension of time granted by the Engineer In Charge is valid provided the contractor accepts the same either expressly or implied by his actions before and subsequent to the date of completion. Such extension of time shall be without prejudice to Company's right to levy compensation under the relevant clause of the contract.

The contractor shall however use his best efforts to prevent or make good the delay by putting his endeavors constantly as may be reasonably required of him to the satisfaction of the Engineer In Charge.

7. Material Supply & other facilities

7.1 The company does not undertake any responsibility for supply of any materials to the contractor.

7.2 If the steel is issued by the department, the wastage of steel shall be the barest minimum. The wastage allowed from theoretical quantity will be upto a maximum of 5% to cover the wastage due to cutting into pieces, bending and other factors. No cut pieces or scrap less than 2 mtr. in length will be taken by the department. Efforts should be made to use the cut pieces of 2 mtr. or above length as far as possible.

If the wastage of steel is more than the permissible variation mentioned above the cost of excess wastage made by the contractor shall be recovered at double the issue rates indicated above, or 115% of prevailing market rate including sales tax and general tax during the period of work, whichever is more.

No allowances shall be entertained on account of Rolling Margin for the steel either issued by the department or procured by the contractor.
7.3 If the cement is issued by the department, the variation of 5% will be permitted over the theoretical consumption of cement for value of work upto Rs.10.00 lakhs and 3% for value of work above Rs.10.00 lakhs. In the event of cement consumed is more/less than specified above, the recovery for the quantity of cement consumed in excess or less than the specified quantity shall be made at double the issue rate or 115% of prevailing market rate including sales tax and general tax during the period of work, whichever is more.

7.4 In case the department is not able to supply cement/steel as per the provisions of the contract, the Engineer In Charge may allow, with the approval of GM(E&T) of the company, the contractor in writing for procurement of cement/steel from the approved sources and the extra on this account including transport charges, if any, over the issue rate shall be reimbursed to the contractor on production of authentic documents. Transportation of cement/steel from the place of purchase to the site of work and proper storage of cement/steel at site shall be contractor's responsibility.

He should maintain proper account of cement/steel issued/procured by him and should allow inspection of his godown and his cement/steel account by the concerned Engineer-in-charge or any other authorised officers of the company. Contractor should draw materials from the company on the basis of actual requirement as assessed by the Engineer In Charge on "as and when required" basis.

7.5 Recovery of cost of materials issued on sale A/c will be made as per actual consumption basis but the Engineer In Charge will have the discretion for making full recovery while processing a particular bill or asking for the return of the balance materials if the work is not progressing satisfactorily.

The contractor shall keep accurate record of materials issued by the company, maintain proper account for the materials received and consumed in the work and shall be open to check by the Engineer In Charge or his authorised representative. The contractor shall ensure that such materials are consumed for the contract works only and the Register for the aforesaid account shall be signed both by the representatives of Engineer In Charge and the contractor.

7.6 All materials, tools and plants brought to site by the contractor including the materials supplied by the company shall be deemed to be held in lien by the company and the contractor shall not have the right to remove the same from the site, without the written permission of the Engineer In Charge. The company shall not however be liable for any loss, theft or damage due to fire or other cause during this period of lien, the responsibility for which shall lie entirely on the contractor.

7.7 The contractor shall bear the cost of loading, transportation to site, unloading, storing under cover as required etc. as may be necessary for the use and keeping the materials in good condition.

7.8 Any surplus materials issued by the company, remaining after completion or termination of the contract, shall be returned by the contractor at his cost to the place of issue and the Engineer In Charge shall accept the same at the rate not exceeding the rate at which these were originally issued taking into consideration the deterioration or damage, if any, that may have been caused during the custody of the contractor. In the event, the contractor fails to return the surplus materials out of those supplied by the company, the Engineer In Charge may, in addition to any other liability which the contractor would incur in this regard, by giving notice in writing require the contractor to pay the amount at double the issue rate for such unreturned surplus materials or 115% of the prevailing market rate including Sales Tax & General Tax during the period of work, whichever is more.

7.9 On completion or on termination of the contract and on complete recovery of secured advance paid by the company, if any, in respect of materials brought to site, the
contractor with due permission of the Engineer In Charge shall be entitled to remove at
his expenses all surplus materials originally supplied by him and upon such removal,
the same shall become the property of the contractor.

7.10 All charges on account of octroi, terminal or sales tax and other duties on materials
obtained for the works from any source (excluding materials supplied by the company)
shall be borne by the contractor.

7.11 The contractor shall arrange necessary electricity at his own cost for the work and
his own establishment. However, if available and feasible the company may arrange
electricity at one point near the work site and necessary recovery of cost of energy
consumed will be made at rates prescribed by the company from time to time. Energy
meter for this purpose shall be provided by the contractor.

7.12 The contractor shall arrange necessary water for the work and his own
establishment. However, if available and feasible the company may arrange water at one
point near the work site for which recovery @ 1% of the contract value of work done will
be made from the contractor's bills.

7.13 Coal required for manufacturing of bricks to be used in the work will be issued @
25 tonnes per one lakh of bricks on payment at the rate prevailing on the date of issue.
Requirement of coal may vary depending on the quality of coal. Transportation of coal and
the charges thereof shall be contractor's responsibility.

7.14 Explosives, detonators and other inflammable materials shall not be used in the
execution of the work at site by the contractor without prior written permission of the
Engineer In Charge. Transportation and storage of such materials shall be done in specified
manner in accordance with the law in force. The contractor shall also obtain licence under
such laws for, transportation, storage, use and all other operations, connected with the
handling of the same.

8. Quality Assurance - Materials and Workmanship

The contractor shall carry out and complete the work in every respect in accordance
with the contract and shall ensure that the work conforms strictly to the drawings,
specifications, instructions of the Engineer In Charge. The Engineer In Charge may issue,
from time to time, further drawings, detailed instructions/directions in writing to the
contractor. All such drawings, instructions/directions shall be consistent with the contract
documents and should be reasonably inferable therefrom, alongwith clarifications/
explanations thereof, if necessary.

8.1 For Quality Assurances of all the norms/ guidelines laid down by the company
herein and elsewhere will form part of the contract for the purpose of quality of works.

8.2 The contractor shall be responsible for correct and complete execution of the work
in a workman like manner with the materials as per specification which shall be subject to
the approval of the company. All work under execution in pursuance of the contract shall
be open to inspection and supervision by the Engineer In Charge or by his authorised
representative or any other official of higher rank or any other person authorised by the
company in his behalf & the contractor shall allow the same.

8.3 All materials to be provided by the contractor shall be in conformity with the
specifications/schedule of work as per the contract and the contractor shall furnish proof, if
so required by the Engineer In Charge to his satisfaction that the materials do so comply.
8.4 The contractor shall immediately after the award of work draw up a schedule giving dates for submission of samples as required or necessary as per the specification for approval of Engineer In Charge who shall approve, if found acceptable, promptly so that there is no delay in the progress of the work of the contractor or of the work of any of the sub-contractor.

On receipt of samples as per schedule, the Engineer In Charge shall arrange to examine/test with reasonable promptness ensuring conformity of the samples with the required specification and complying with the requirements as per contract documents keeping in view that the work shall be in accordance with the samples approved by him. The contractor shall not start bringing materials at the site unless the respective samples are approved. Materials conforming to approved samples shall only be brought to site.

Samples are to be supplied by the contractor at his own cost. The cost involved in tests shall be borne by the contractor. If any test is ordered by the Engineer In Charge which is to be carried out by any independent person or agency at any place other than the site even then the cost of materials and testing charge etc. shall be borne by the contractor. If the test shows that the materials are not in accordance with the specifications, the said materials shall not be used in the work and removed from the site at contractors cost.

8.5 The company, through the Engineer In Charge, shall have full powers to reject any materials or work due to a defect therein for not conforming to the required specification, or for materials not being of the required quality and standard or for reasons of poor workmanship or for not being in accordance with the sample approved by him. The contractor shall forthwith remedy the defect/replace the materials at his expense and no further work shall be done pending such rectification/replacement of materials, if so instructed by the Engineer In Charge.

In case of default on the part of the contractor, the Engineer In Charge shall be at liberty to procure the proper materials for replacement and/or to carry out the rectifications in any manner considered advisable under the circumstances and the entire cost & delay for such procurement/rectification shall be borne by the contractor.

8.6 The Engineer In Charge shall be entitled to have tests carried out for any materials, according to the standard practice followed for such tests, other then those for which satisfactory proof has already been furnished by the contractor who shall provide at his expense all facilities which the Engineer In Charge may require for the purpose.

The cost of any other tests, if so required by the Engineer In Charge, shall be borne by the contractor only, if the test shows the workmanship or materials not to be in accordance with the provision of the contract or the instruction of Engineer In Charge, but otherwise by the company.

8.7 Access to the works: The Engineer-in-charge and any person authorised by the company shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles are being obtained for the works and the contractor shall afford every facility for and every assistance in or in obtaining the right to such access.

8.8 Inspection of works: i) No work shall be covered up or put out of view without the approval of the Engineer-in-charge or the Engineer-in-charge's representative or any other officer nominated by the company for the purpose and the contractor shall afford full opportunity for the EIC or EIC’s representative or any other officer nominated by the company for the purpose to examine and measure any work which is about to be covered up or put out of view and to examine foundations before permanent work is
placed thereon, the contractor shall give due notice to the Engineer-in-charge's representative whenever any such work or foundations is ready or about to be ready for examination and the Engineer-in-charge's representative shall, without unreasonable delay, unless he considers it unnecessary and advises the contractor accordingly, attend for the purpose of examining and measuring such work or foundations.

ii) The contractor shall uncover any part or parts of the works or making openings in or through the same as the Engineer In Charge may from time to time direct and shall reinstate and make good such part or parts to the satisfaction of Engineer-in-charge.

If any such part or parts have been covered up or put out of view after compliance with the requirement of sub-clause above and are found to be executed in accordance with the contract, the expenses of uncovering, making openings in or through and making good the same shall be borne by the Employer, but in any other cases all costs shall be borne by the contractor.

8.9 Removal of Improper Work and Materials:

i) The Engineer-in-charge shall during the progress of the works have power to order in writing from time to time:

   a) The removal from the site, of any materials which in the opinion of Engineer-in-charge, are not in accordance with the contract/ work order/ approved sample.
   b) The substitution with proper and suitable materials.
   c) The removal and proper re-execution, notwithstanding any previous test thereof or interim payment therefor, of any work which in respect of materials or workmanship is not in accordance with the contract.

ii) In case of default on the part of the contractor in carrying out such order, the Engineer-in-charge shall be entitled to employ and pay other agency to carry out the same and all expenses consequent thereon shall be recoverable from the contractor or may be deducted from any amount due or which may become due to the contractor.

8.10 Devaluation of Work: In lieu of rejecting work done or materials supplied not in conformity with the contract/work order/approved samples, the Engineer-in-charge or any other officer nominated by the company for the purpose may allow such work or materials to remain, provided the Engineer In Charge/ the officer nominated by the company is satisfied with the quality of any materials, or the strength and structural safety of the work, and in that case shall make such deduction for the difference in value, as in his opinion may be reasonable.

8.11 Final Inspection of Work: The Engineer-in-charge and any other officer nominated by the company for the purpose shall make final inspection of all work included in the contract/work order, or any portion thereof, or any completed structure forming part of the work of the contract, as soon as practicable after notification by the contractor that the work is completed and ready for acceptance. If the work is not acceptable to the Engineer-in-charge at the time of such inspection, he shall inform the contractor in writing as to the particular defects to be remedied before final acceptance can be made.

8.12 Defects appearing after acceptance: Any defects which may appear within the defect liability period and arising, in the opinion of the Engineer-in-charge, from lack of conformance with the drawings and specifications, shall, if so required by the Engineer-in-charge in writing, be remedied by the contractor at his own cost within the time
stipulated by the Engineer-in-charge. If the contractor fails to comply, the Engineer-in-
charge may employ other persons to remedy the defects and recover the cost thereof from
the dues of the contractor.

8.13 Site Order Book: A Site Order Book is a Register duly certified by the Engineer-in-
charge regarding number of pages it contains, each page being numbered, name of work,
name of contractor, reference of contract/ work order and the aforesaid certificate should
be recorded on its first page.

Site Order Books shall be maintained on the sites of works and should never be
removed therefrom under any circumstances. It shall be the property of the company. The
Engineer In Charge or his authorised representative shall duly record his observations
regarding any work which needs action on the part of the contractor like, improvement in
the quality of work, failure to adhere to the scheduled programme etc. as per contract/work
order. The contractor shall promptly sign the site order book and note the orders given
therein by the EIC or his representative and comply with them. The compliance shall be
reported by the contractor in writing to EIC in time so that it can be checked.

The Site Order Book will be consulted by the Engineer In Charge at the time of
making both running on account and final bills of the contractor. A certificate to this effect
should be given in the Measurement books by the Engineer In Charge or his
representative.

8.14 Samples and Testing of Materials: All the materials to be procured by the
contractor and to be used in work shall be approved by the Engineer In Charge in advance,
and shall pass the tests and analysis required by him, which will be as specified in the
specifications of the items concerned and or as specified by BIS or the IRC standard
specifications acceptable to the Engineer In Charge. The method of sampling and testing
shall be as per the relevant BIS, IRC and other relevant standards and practices. Minor
minerals like sand, stone chips etc. shall be conforming to relevant BIS standards. All
bought out items including Cement and Steel shall be procured from such manufacturers
who hold valid license conforming to relevant BIS standards for manufacturing of such
items.

8.15 Storage of Materials: Materials shall be so stored as to ensure the preservation of
the quality and fitness for the work. When considered necessary by the Engineer-in-
charge, they shall be placed on wooden platforms or other hard, clean surfaces and not
directly on the ground.

Materials shall be placed under cover when so directed and the contractor shall
erect and maintain at his own cost temporary weather-proof sheds at the work site for the
purpose. Stored materials shall be so located as to facilitate prompt inspection. All stored
materials shall be inspected at the time of use in the work, even though they may have
been inspected and approved before being placed in storage or during storage.

8.16 Defective Materials: All materials not conforming to the requirements of the
specifications shall be considered as defective, and all such materials, whether in place or
not shall be rejected. They shall be removed immediately by the contractor at his expenses
and replaced with acceptable material.

No rejected material, the defects of which have been subsequently corrected, shall
be used on the work until approval in writing has been given by the Engineer In Charge.
Upon failure on the part of the contractor to comply with any instruction of the Engineer-in-charge made under the provisions of this article within the time stipulated by the Engineer-in-charge, the Engineer-in-charge shall have authority to remove and replace defective material and recover the cost of removal and replacement from the contractor.

Further all such defective material lying at site not removed and replaced within 30 days after issue of notice by the Engineer-in-charge, if the Engineer-in-charge so decides, shall dispose off such material in any manner without any further written notice to the contractor.

9. Measurement and Payments

Except where any general or detailed description of the work in the Bill of Quantities or specifications of the contract/ work order provides otherwise, measurement of work done shall be taken in accordance with the relevant standard method of measurement published by the Bureau of Indian Standards (BIS) and if not covered by the above, other relevant Standards/practices shall be followed as per instructions of the Engineer In Charge.

9.1 All items of work carried out by the contractor in accordance with the provision of the contract having a financial value shall be entered in the Measurement Book as prescribed by the company so that a complete record of the measurements is available for all the works executed under the contract and the value of the work executed can be ascertained and determined there from. Measurements of completed work / portion of completed work shall be recorded only in the Measurement Books.

9.2 Measurement shall be taken jointly by the Engineer-in-Charge or his authorised representative and by the contractor or his authorised representative.

9.3 Before taking measurements of any work, the Engineer In Charge or the person deputed by him for the purpose shall intimate the contractor to attend or to send his representative to attend the measurement. Every measurement thus taken shall be signed and dated by both the parties on the site on completion of the measurement. If the contractor objects to any measurements, a note to that effect shall be made in the Measurement Book / Log Book and signed and dated by both the parties.

9.4 The measurement of the portion of work/items of work objected to, shall be re-measured by the Engineer In Charge himself or the authority nominated by the company for the purpose in the presence of the contractor or his authorised representative and recorded in the M.B. which shall be signed and dated by both the parties. Measurements so recorded shall be final and binding upon the contractor and no claim whatsoever shall thereafter be entertained.

In case the contractor or his authorised representative does not attend to the joint measurements at the prefixed date and time after due notice, the measurements taken by the Engineer In Charge or his representative shall be final and binding on the contractor.

Measurement of the extra items of work or excess quantities of work duly authorised in writing by the Engineer In Charge shall also be taken and recorded in the
M.B. based on the existing items in the SOR of the company and if such items do not exist in the company's SOR, the description of the work shall be as per actual execution. Payment for such extra items will be based on the rates to be derived as described in the relevant clauses of the contract/ work-order.

9.5 No work shall be covered up or put out of view without the approval by the Engineer In Charge and recording of measurements and check measurement thereof duly accepted by the contractor. The contractor shall provide full opportunity to the Engineer In Charge or his representative to examine and measure all works to be covered up and to examine the foundations before covering up.

The contractor shall also give notice to Engineer In Charge whenever such works or foundations are ready for examination and the Engineer In Charge shall without unreasonable delay arrange to inspect and to record the measurements, if the work is acceptable and advise the contractor regarding covering of such works or foundations.

9.6 In case of items which are claimed by the contractor but are not admissible according to the department, measurements of such items, will be taken by for record purposes only and without prejudice so that in case it is subsequently decided by the department to admit the contractor's claims, there should be no difficulty in determining the quantities of such work. A suitable remark should, however, be made against such measurements to guard against payment in the ordinary way.

9.7 Payments: The running on account payments may be made as per below mentioned intervals.

(A) Payment for 80% of the total value of the work executed at a particular site will be made after Installation, Testing and successful trial run of the complete system and issue of System acceptance certificate by the concerned engineer-in-charge/ site in-charge of the complete system for that particular site.

(B) Balance 20% payment will be made after successful commissioning & acceptance by the concerned engineer-in-charge/ site in-charge, subject to Supply, Installation, Testing, Trial run and commissioning, of the complete system at all the eleven sites as mentioned in the work order and issue of a combined (for all the 11 sites) final installation certificate by the GM(E&T), MCL Hqrs.

(C) The Payment against AMC will be made on quarterly basis after successful completion of the quarter.

(D) Paying Authority : GM(Finance), MCL, HQ/ AFM, MCL HQ

9.7.01 Running on account bill/bills for the work executed/ materials supplied in accordance with the work order/ contract shall be prepared on the basis of detailed measurements recorded as described hereinbefore and processed for payments.

9.7.02 Payment of on account bill shall be made on the Engineer In Charge's certifying the sum to which the contractor is considered entitled by way of interim payment for the following:

a) The work executed as covered by the bill/bills after deducting the amount already paid, the security deposit and such other amounts as may be deductible or recoverable in terms of the work order/ contract.

b) (i) Payment for excess quantity of work done with the written instructions of the Engineer In Charge for items already appearing in the bill of quantities of work with approved rates, will be made alongwith the on account bills only upto 10% of the quantity provided in the agreement subject to overall value of work not exceeding the agreement value.

(ii) The GM(E&T) of the company may authorise interim payment for excess work done upto 20% of the quantity of work provided in the Bill of Quantity of the work
subject to overall value of work done does not exceed the contract value.

c) Extra items of work executed will be paid on specific written authorisation of GM(E&T) of the company provided that the value of such extra items of work when added together is not more than 10% of the contract value and the total gross payment including excess quantity does not exceed the contract value.

Balance amount on account of excess quantity and extra items of work executed shall be paid after the deviation estimate / revised estimate regularising the extra items and excess quantities of work is sanctioned by the competent authority of the company with the concurrence of the Finance Department of the company.

d) On the Engineer In Charge’s certificate of completion in respect of the work covered by the contract / final measurements of the work certified by the Engineer In Charge or his representative.

9.7.03 The measurements shall be entered in the M.B for the work done upto the date of completion and evaluated based on the approved rates for the items in the contract agreement/sanctioned revised estimate. In case of extra items of work, the rates shall be derived as stated in the relevant clause of the contract.

The payments shall be released against the final bill subject to all deductions which may be made on account of materials supplied, water supply for construction, supply of electricity and any other dues payable by the contractor to the company, and further subject to the contractor having given to the Engineer In Charge a no claim certificate. The contractor shall indemnify the company against proof of depositing royalty on account of minor minerals used in the work before the final bill is processed for payments. The final payment to be made will also be subject to Clause-4.5 of the General Terms & Conditions of the contract.

9.7.04 Any certificate given by the Engineer In Charge for the purpose of payment of interim bill/bills shall not of itself be conclusive evidence that any work/materials to which it relate is/are in accordance with the contract and may be modified or corrected by the Engineer In Charge by any subsequent certificate or by the final certificate.

9.7.05 The company reserve the right to recover/enforce recovery of any over payments detected after the payment as a result of post payment audit or technical examination or by any other means, notwithstanding the fact that the amount of disputed claims, if any, of the contractor exceeds the amount of such overpayment and irrespective of the facts whether such disputed claims of the contractor are the subject matter of arbitration or not.

The amount of such over payments shall be recovered from subsequent bills under the contract, failing that from contractor's claim under any other contract with the company or form the contractor's security deposit or the contractor shall pay the amount of over payment on demand. In case of contractor's non-payment on such demand, the same should be realised from the contractor's dues, if any, with Coal India Limited or any of its subsidiaries.

9.7.06 The contractors are required to execute all works satisfactorily and according to the specifications laid down in the contract/ work order. If certain items of work, executed by the contractor, are below specifications, the contractor should re-do them according to the specifications and instructions of EIC and if the contractor fails to rectify the defect within the time and in the manner specified by the EIC, the work shall be got re-done or rectified by the department at the risk and cost of the contractor. Engineer In Charge may accept such work of below specifications provided the department is satisfied with the quality of
such works and the strength/structural safety of such works.
In that case Engineer In Charge shall make such deductions for the difference in value, as
in his opinion is reasonable and is approved by the accepting authority of the company i.e.
GM(E&T) of the company in this case or any other officer nominated by GM(E&T) for
the purpose.

9.7.07 **Payment Stage: The payment stage involved will be as under,**

i) Signature of Astt Foreman/Forman/Forman I/C, (E&T)/(E&M) in MB’s both
in pages recording measurements, abstract of bill & the duly filled in bill form.

ii) Signature of Engineer(E&T)/(E&M)/EE(E&T)/(E&M) with appropriate
check measurements in the MB’s and the bill form.

iii) Signature of Sr. EE(E&T)/(E&M)/SE(E&T)/(E&M) with appropriate check
measurements in MB’s and the bill form.

iv) Signature of Engineer in Charge as per definition as at clause 1(vii) of the
General Terms and Conditions, as a token of acceptance for payment of the bill.
The EIC may sign in the abstract of the bill in the MB & the bill form. In
between stage iii) and iv) accountal checking may be made by the concerned
Accounts Officer/ Accountant.

9.7.08 **Secured Advance:** Secured advance can be paid for items of materials required for
execution of the work and covered under categories A & B and supplied by the contractor
at work site, supported by necessary vouchers, challans, test certificates etc. after
execution of indemnity bond as per prescribed Form of the company on non-judicial stamp
paper of prescribed value.

This advance shall be recovered in four equal installments or as per consumption
whichever is higher. Engineer In Charge shall recover at his discretion all or any part of
secured advance paid, if in his opinion the work is not progressing satisfactorily or the
security of these materials at site is not adequately taken care of by the contractor. Secured
advance shall be payable for contracts of value above Rs.10.00 lakhs only.

Secured advance for structural steel sections, reinforcement steel and cement,
collected at site, will be paid upto 75% of the corresponding stock yard prices of SAIL for
the corresponding steel items and Govt. approved/ D.G.S.D. prices for cement, if the same
exist.

In case of non-availability of Govt. approved prices of cement & steel and for the
materials falling under Category - A and B the secured advance will be paid at the basic
rate available in the approved schedule of rates of the company plus or minus the overall
percentage on which the work was awarded, provided such rate is not more than 60% of
the quoted rate of the contractor for the actual work.

At any point of time the outstanding recoverable secured advance shall not be more
than 10% of the contract value.

Items against which secured advance can be granted:
**Category-A**

**Civil:**
1. Bricks
2. Stone and brick aggregate
3. Stones
4. Finished products of brass, iron and steel such as doors & windows frames, wire mesh, gate, GI Sheets.
5. Pre-cast R.C.C. products such as pipes, jali, water storage tanks etc.
6. Doors & Window fittings.
7. Pipes and sanitary fittings of CI, SCI & HCI

**Electrical:**
1. Steel conduits
2. G.I. Pipes
3. I.C. Boards
4. Switchgears (Air circuit beakers and Air break switches)
5. C.I. Boxes.
6. A.C.S.R. Conductors
7. A.C. Plant & Machinery
8. Pumps
9. Generating sets (without oil)

**Items against which secured advance can be granted:**

**Category- B**

**Civil:**
1. Glazed tiles, terrazzo tiles and similar articles.
2. Marble slabs
3. Asbestos cement products
4. Finished timber products such as doors, windows, flush doors, particle boards (subject to mandatory test being satisfactory) etc.
5. Bitumen in sealed drums
6. Bitumen felt
7. Polythene pipes and fittings and tanks
8. Sanitary fittings and pipes of S.W., porcelain and chinaware materials
9. Laminated / Safety, one way vision, and bullet proof glasses.
10. Chemical required for anti-termite treatment (in sealed drums)
11. Paints, varnishes, distempers, pigment, spirits etc.

**Electrical:**
1. Transformers
2. Oil-filled switch gears.
3. L.T. & H.T.Cables
4. Fans
5. Storage and Dry Batteries
6. Insulation tapes
7. Epoxy cable compounds  
8. Electric light fittings  
9. Wooden battens, casing & capping and wooden boards  
10. Flexible wires  
11. PVC materials  
12. Oil and lubricants  
13. Rubber materials  
14. Glass wool, thermocol & other insulating materials  

In addition to indemnity bond, for materials listed under Category-B, the contractor shall be required to provide necessary insurance cover of equivalent value of materials.

Items against which no secured advance shall be granted:

**Civil:**

1. Glass products other than those indicated in Category-B.  
2. Sand and moorum  
3. Chemical compounds other than those indicated in Category-B.

**Electrical:**

1. Glass gloves and shades  
2. Bulbs and tubes  
3. Petrol and diesel  
4. Freon and other refrigeration gases.

9.8 Income tax deduction @ 2% (Two percent) of the gross value of each bill or at the rate as amended from time to time, shall be made unless exempted by the competent authority of the Income Tax Department.

Sales tax on works contract shall be payable by the contractor. If, however, the company is asked to make deduction from the contractor’s bills, the same shall be done and a certificate to this effect shall be issued to the contractor for dealing with the State Govt. and the company does not take any responsibility to do anything further in this regard.

9.9 No interest shall be payable on the amounts withheld, under the terms of the Contract Agreement/Work-order.

9.10 Share of Service Tax (to be deposited by the Bidder), if any is not to be paid in on account bill but to be reimbursed to the bidder on submission of separate Invoice having therein Name of Bidder, Address, Agreement/W.O. reference, on account bill-wise value, Service Tax Registration No. and Amount of Service Tax deposited (along with a copy of deposit receipt) to avail CENVAT credit by MCL as per Rule.

The reimbursement of Service Tax to the bidder will be made on the basis of actual executed value of work and actual Service Tax paid by the bidder on the basis of assessment made by the Service Tax Authority, if any.
10. **Termination, Cancellation, Suspension and Foreclosure of Contract**

The company shall, in addition to other remedial steps to be taken as provided in the conditions of contract be entitled to cancel the contract in full or in part, if the contractor:

a) makes default in proceeding with the works with due diligence and continues to do so even after a notice in writing from the Engineer In Charge, then on the expiry of the period as specified in the notice

Or

b) commits default/breach in complying with any of the terms and conditions of the contract and does not remedy it or fails to take effective steps for the remedy to the satisfaction of the Engineer In Charge, then on the expiry of the period as may be specified by the Engineer In Charge in a notice in writing.

Or

c) obtains a contract with the company as a result of ring tendering or other non-bona-fide methods of competitive tendering

Or

d) shall offer or give or agree to give any person in the service of the company or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for act/acts of favour in relation to the obtaining or execution of this or any other contract for his company.

Or

e) fails to complete the work or items of work with individual dates of completion, on or before the date/dates of completion or as extended by the company, then on the expiry of the period as may be specified by the Engineer In Charge in a notice in writing.

Or

f) transfers, sublets, assigns the entire work or any portion thereof without the prior approval in writing from the Engineer In Charge. The Engineer In Charge may by giving a written notice, cancel the whole contract or portion of it in default.

10.1 The contract shall also stand terminated under any of the following circumstances:

a) If the contractor being an individual in the case of proprietary concern or in the case of a partnership firm any of its partners is declared insolvent under the provisions of Insolvency Act for the time being in force, or makes any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors amounting to proceedings for liquidation or composition under any Insolvency Act.

b) In the case of the contractor being a company, its affairs are under liquidation either by a resolution passed by the contractors company or by an order of court, not being a voluntary liquidation proceedings for the purpose of amalgamation or reorganisation, or a receiver or manager is appointed by the court on the application by the debenture holders of the contractor's company, if any.

c) If the contractor shall suffer an execution being levied on his/their goods, estates and allow it to be continued for a period of 21 (twenty-one) days.

d) On the death of the contractor being a proprietary concern or of any of the partners in the case of a partnership concern and the company is not satisfied that the legal representative of the deceased proprietor or the other surviving partners of the
partnership concern are capable of carrying out and completing the contract. The decision of the company in this respect shall be final and binding which is to be intimated in writing to the legal representative or to the partnership concern.

10.2 On cancellation of the contract or on termination of the contract, the Engineer In Charge shall have powers:

   a) to take possession of the site and any materials, constructional plant, equipments, stores etc. thereon.

   b) to carry out the incomplete work by any means at the risk and cost of the contractor.

   c) to determine the amount to be recovered from the contractor for completing the remaining work or in the event the remaining work is not to be completed the loss/damage suffered, if any, by the company after giving credit for the value of the work executed by the contractor upto the time of cancellation less on a/c payments made till date and value of contractor's materials, plant, equipments, etc. taken possession of after cancellation.

   d) to recover the amount determined as above, if any, from any money due to the contractor on any account or under any other contract and in the event of any shortfall, the contractor shall be called upon to pay the same on demand. The need for determination of the amount of recovery of any extra cost/expenditure or of any loss/damage suffered by the company shall not however arise in the case of termination of the contract for death/demise of the contractor as stated in clause 10.1(d) of the contract.

   e) to give the contractor or his representative of the work 7 (seven) days notice in writing for taking final measurement for the works executed till the date of cancellation or termination of the contract. The Engineer In Charge shall fix the time for taking such final measurement and intimate the contractor in writing. The final measurement shall be carried out at the said appointed time notwithstanding whether the contractor is present or not. Any claim as regards measurement which the contractor is to make shall be made in writing within 7 (seven) days of taking final measurement by Engineer-In-charge as aforesaid and if no such claim is received, the contractor shall be deemed to have waived all claims regarding above measurements and any claim made thereafter shall not be entertained.

10.3 Suspension of Work:

   i) The company shall have power to suspend the work or any part thereof and the Engineer In Charge may direct the contractor in writing to suspend the work, for such period and in such manner as may be specified therein, on account of any default on the part of the contractor, or for proper execution of the work for reasons other than any default on part of the contractor, or on ground of safety of the work.

   ii) In the event of suspension for reasons other than any default on the part of the contractor, extension of time shall be allowed by the company equal to the period of such suspension and the contractor shall properly protect and secure the works to the extent necessary during such suspension.
The contractor shall carry out the instructions given in this respect by the Engineer-In-Charge & if such suspension exceeds 45 (forty five) days, the contractor will be compensated on mutually agreed terms.

10.4 The work shall, throughout the stipulated period of contract, be carried out with all due diligence on the part of the contractor. In the event of termination or suspension of the contract, on account of default on the part of the contractor, as narrated hereinbefore, the security deposit and other dues of this work or any other work done under this company shall be forfeited and brought under the absolute disposal of the company provided, that the amount so forfeited shall not exceed 10 (ten) percent of the contract value.

10.5 Foreclosure of contract:

If at any time after acceptance of the tender the company decides to abandon for any reason whatsoever the company, through its Engineer In Charge, shall give notice in writing to that effect to the contractor. In the event of abandonment the company shall be liable:

a) to pay reasonable amount assessed and certified by the Engineer In Charge of the expenditure incurred, if any, by the contractor on preliminary works at site e.g. temporary access roads, temporary construction for labour and staff quarters, office accommodation, storage of materials, water storage tanks and water supply for the work including supply to labour/staff quarters, office etc.

b) to pay the contractor at the contract rates full amount for works executed and measured at site upto the date of such abandonment.

c) to pay for the materials brought to site or to be delivered at site, which the contractor is legally liable to pay, for the purpose of consumption in works carried out or were to be carried out but for the foreclosure, including the cost of purchase and transportation and cost of delivery of such materials. The materials to be taken over by the company should be in good condition and the company may allow at its discretion the contractor to retain the materials in full or in part if so desired by him and to be transported by the contractor from site to his place at his own cost with due permission of the Engineer In Charge.

d) to take back the materials issued by the company but remaining unused, if any, in the work on the date of abandonment/reduction in the work, at the original issue price less allowance for any deterioration or damage caused while in custody of the contractor.

e) to pay for the transportation of tools and plants of the contractor from site to contractor's place or to any other destination, whichever is less.

10.5.1 The contractor shall, if required by the Engineer In Charge, furnish to him books of accounts, papers, relevant documents as may be necessary to enable the Engineer In Charge to assess the amounts payable in terms of clauses 10.5(b) (c) & (e) of the contract. The contractor shall not have any claim for compensation for abandonment of the work, other than those as specified above.

Except in cases where the contract provides for "Performance Test" before issue of defect liability certificate, in which case the issue of defect liability certificate shall be in accordance with the procedure specified therein, the contractor shall give notice of completion of work, as soon as the work is completed, to the Engineer In Charge. The Engineer In Charge and or any other Officer, nominated for the purpose by the company, shall within 30 (thirty) days from the receipt thereof, inspect the work and ascertain the defects/deficiencies, if any, to be rectified by the contractor as also the items, if any, for which payment shall be made at reduced rate.

If the defects, according to the Engineer In Charge are of a major nature and the rectification of which is necessary for the satisfactory performance of the contract, he shall intimate in writing the defects and instruct the contractor to rectify the defects/remove deficiencies within the period and in the manner to be specified therein. In such cases defect liability certificate will be issued by the Engineer In Charge after the above rectifications are carried out/ deficiencies are removed by the contractor to the satisfaction of Engineer In Charge.

In the event there are no defects or the defects/ deficiencies are of a minor nature and the Engineer In Charge is satisfied that the contractor has already made arrangements for rectification, or in the event of contractor's failure to rectify the defects for any reason whatsoever, the defects can be rectified by the company departmentally or by other means and the 50% of the security deposit of the contractor shall be sufficient to cover the cost thereof, he shall issue the defect liability certificate indicating the date of completion of the work, defects to be rectified, if any, and the items, if any, for which payment shall be made at reduced rate indicating reasons therefor and with necessary instructions to the contractor to clear the site/place of work or all debris/ waste materials, scaffoldings, sheds, surplus materials etc. making it clean.

11.1 In cases where separate period of completion for certain items or groups of items are specified in the contract, separate defect liability certificate for such items or groups of items may be issued by the Engineer In Charge after completion of such items on receipt of notice from the contractor only in the event the work is completed satisfactorily in every respect.

Refund of security deposit and payment of final bill shall, however, be made on completion of the entire contract work, but not on completion of such items of work.

12. Additional Responsibilities of the Contractor(s)

The cost on account of the "Additional Responsibilities of the Contractors" under this clause is deemed to be included in the tendered rates.

i) The company reserves the right to let other contractors also works in connection with the Project and the contractor/contractors shall co-operate in the works for the introduction and stores and materials and execution of his/their works.

ii) The contractor/contractors shall keep on the work site during the progress a competent and experienced Resident Engineer exclusively for the work and necessary assistants who shall represent the contractor(s). The contractor shall employ, on the site in connection with the execution and maintenance of the work, the following technical staff:
For Buildings Roads, Water Supply & Sanitary Works

1) For value of work ranging from Rs.10 lakhs to Rs.20 lakhs.
   1 Experienced Diploma holder.

2) For value of work above Rs.20 lakhs and upto Rs.1 crore.
   1 Experienced Graduate Engineer in addition to Diploma holder as per sl.no.4 below.
   1 Graduate Engineer extra in addition to Graduate Engineer and Diploma holder as per sl.no.1 & 4.
   1 Diploma holder extra.

3) For value of work in excess of Rs.1 crore & for every additional Rs.2 crores or part thereof.
   1 Experienced Diploma holder extra.

4) For value of work in excess of Rs.20 lakhs & for every additional Rs.50 lakhs or part thereof.
   1 Graduate Engineer extra in addition to Graduate Engineer and Diploma holder as per sl.no.1 & 4.
   1 Diploma holder extra.

For Industrial Structures:

1) For value of work ranging from Rs.5 lakhs to Rs.15 lakhs.
   1 Experienced Diploma holder.

2) For value of work above Rs.15 lakhs and upto Rs.75 lakhs.
   1 Experienced Graduate Engineer in addition to Diploma holder as per sl.no.4 below.
   1 Graduate Engineer extra in addition to Graduate Engineer and Diploma holder as per sl.no.1 & 4.
   1 Diploma holder extra.

3) For value of work in excess of Rs.75 lakhs & for every additional Rs.1.5 crores or part thereof.
   1 Experienced Diploma holder extra.

4) For value of work in excess of Rs.15 lakhs & for every additional Rs.50 lakhs or part thereof.

The contractor shall intimate the Engineer In Charge in writing the names, qualifications, experience and full postal address of each and every technical personnel employed at site by him.

The contractor(s) shall not be allowed to execute the work unless he/they engage the required technical staff at site as stated above. The delay on this account, if any, shall be the contractor's responsibility.

Important instructions shall be confirmed to the contractor(s) in writing. If the contractor/contractors in course of the works finds/find any discrepancy between the drawing, forming part of the contract documents and the physical conditions of the locality or any errors or omissions in drawings except those prepared by himself / themselves and not approved by the Engineer In Charge. It shall be his/their duty to immediately inform the Engineer In Charge in writing and the Engineer In Charge shall verify the same. Any work done after such discovery and without intimation as indicated above will be done at the risk of the contractor/contractors.
iii) The contractor / contractors shall employ only competent, skillful and orderly men to do the work. The Engineer In Charge shall have the right to ask the contractor/contractors to remove from the work site any men of the contractor/contractors who in his opinion is undesirable and the contractor/contractors will have to remove him within 3 (three) hours of such orders.

The contractor shall employ apprentices in the execution of the contract work as required under Apprentices Act.

The contractor shall further be responsible for making arrangements at his own cost, or accommodation and social needs of the staff and workers under his employment.

iv) Precautions shall be exercised at all times by the contractor(s) for the protection of persons (including employees) and property. The safety required or recommended by all applicable laws, codes, statutes and regulations shall be observed by the contractor(s). In case of accidents, the contractor(s) shall be responsible for compliance with all the requirements imposed by the Workmen's Compensation Act or any other similar laws in force, and the contractor(s) shall indemnify the company against any claim on this account.

All scaffoldings, ladders and such other structures which the workmen are likely to use shall be examined by the Engineer In Charge or his authorised representative whenever they want and the structure must be strong, durable, and safe and of such design as required by Engineer In Charge.

In no case any structure condemned by the Engineer In Charge or his authorised representatives shall be kept on the work and such structure must be pulled down within three hours of such condemnation and any certificate or instructions, however, shall in no way absolve the contractor/contractors from his/their responsibility, as an employer, as the company shall in no way be responsible for any claim.

The contractor / contractors shall at all times exercise reasonable precautions for the safety of employees in the performance of his/their contract and shall comply with all applicable provisions of the safety laws drawn up by the State Govt. or Central Govt. or Municipalities and other authorities in India. The contractor/contractors shall comply with the provision of the safety handbook as approved and amended from time to time by the Government of India.

v) The contractor / contractors shall familiarise themselves with and be governed by all laws and rules of India and Local statutes and orders and regulations applicable to his/their work.

vi) The contractor shall maintain all records as per the provision made in the various statutes including Contract Labour (Regulation & Abolition) Act, 1970 and the Contract Labour (Regulation & Abolition) Central Rules, 1971, Minimum Wages Act, Workmen Compensation Act etc. and latest amendment thereof. Such records maintained by the contractor shall be opened for inspection by the Engineer In Charge or by the nominated representative of the Principal Employer.

vii) The contractor/contractors shall provide facilities for the sanitary necessities of all persons employed on the work shall be constructed and maintained in the number, manner and place approved or ordered by the Engineer In Charge. The contractor/contractors shall vigorously prohibit committing of nuisance at any other place. Cost of all works under this item shall be covered by the contractor/contractor's tendered rates.
viii) The contractor/contractors shall furnish to the Engineer In Charge or his authorised representative with work reports from time to time regarding the contractor / contractors organisation and the progress made by him / them in the execution of the work as per the contract.

ix) All Duties, taxes (excluding Service Tax) and other levies, payable by the contractor under the contract or for any other cause as applicable on the last date of submission of tender shall be included in the rates, prices and the total bid price submitted by the bidder. All incidentals, overheads etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total bid price submitted by the bidder. **Applicable Service Tax on the works will be computed automatically in the BOQ sheet based on prefix business log in and the option selected by the bidder with regard to his Service Tax status.**

However, such duties, taxes, levies etc. which is notified after the last date of submission of tender and / or any increase over the rate existing on the last date of submission of tender shall be reimbursed by the company on production of documentary evidence in support of payment actually made to the concerned authorities.

The company reserves the right to deduct/withhold any amount towards taxes, levies, etc. and to deal with such amount in terms of the provisions of the Statute or in terms of the direction of any Statutory authority and the company shall only provide with certificate towards such deduction and shall not be responsible for any reason whatsoever.

In case the company land is used for manufacture of bricks or extraction of gravels etc. the contractor will have to pay compensation to the company ( apart from the liability of the contractor to make the payment of royalty etc. to the State Government) at the same rates or royalty fixed by the State Government or an appropriate deduction may be made in the rate to be paid to the contractors.

x) The contractor / contractors shall make his / their own arrangement for all materials, tools, staff and labourer required for the contract, which shall include cost of lead, lift, loading, unloading, railway freight, recruiting expenses and any other charges for the completion of the work to entire satisfaction of the company.

xi) The contractor / contractors shall make their own arrangement for carriage of all materials to the work site at his/their own cost.

xii) The work shall not be sublet to any other party, unless approved by Engineer In Charge, in writing.

xiii) a) No fruit trees or valuable plants or trees with trunk diameter exceeding 150mm shall be pulled, destroyed or damaged by the contractor/contractors or any of his/their employees without the prior permission of the company, failing which the cost of such trees or plants shall be deducted from the contractor/contractors dues at the rate to be decided by the company. The rates quoted are supposed to include clearance of shrubs and jungles and removal of such trees upto 150 mm dia., as will be permitted by the Engineer In Charge in writing.

b) Anything of historical or other interest or of significant value unexpectedly discovered on the site is the property of the employer. The Contractor is to notify the Nodal Officer or his nominee of such discoveries and carry out the Nodal Officer or his nominee’s instructions for dealing with him.
xiv) The contractor / contractors shall not pay less than the minimum wages to the labourers engaged by him/them as per Minimum Wages Act or such other legislation or award of the minimum wage fixed by the respective State Govt. or Central Govt. as may be in force.

xv) All accounts shall be maintained properly and the company shall have the right of access and inspection of all such books of accounts etc., relating to payment of labourer considered necessary and the company may arrange for witnessing the payment to the labourer by its representatives.

xvi) The contractor shall in additions to any indemnity provided by the relevant clauses of the agreement or by law, indemnify and keep indemnified for the following:

a) The company or any agent or employee of the company against any action, claim or proceeding relating to infringement or use of any patent or design right and shall pay any royalties or other charges which may be payable in respect of any article or material included in the contract.

However, the amount so paid shall be reimbursed by the company in the event such infringement has taken place in complying with the specific directions issued by the company or the use of such article or material was the result of any drawing and/or specifications issued by the company after submission of tender by the contractor. The contractor must notify immediately after any claim being made or any action brought against the company, or any agent or employee of company in respect of any such matter.

b) The company against all claims, damages or compensation under the provisions of payment of Wages Act, 1938, Minimum Wages Act, 1948, Employer's Liability Act, 1938, The Workmen's Compensation Act, 1923, Industrial Dispute Act, 1947, Mines Act as applicable, Employees State Insurance Act 1948 and Maternity Benefit Act, 1961, Acts regulating P.F.or any modification thereof or any other law relating thereto and rules made there under from time to time, as may be applicable to the contract which may arise out of or in consequence of the construction or maintenance or performance of the work under the contract and also against costs, charges and expenses of any suit, action or proceedings arising out of any accident or injury.

c) The company against all losses and claims for injuries or damages to any third party or to any property belonging to any third party which may arise out of or in consequence of the construction or maintenance or performance of the work under the contract and against all claims/demands proceedings/damages, cost charges and expenses whatsoever in respect of or in relation thereto.

xvii) The contractor is under obligation to hand over to the company the vacant possession of the completed building structures failing which the Engineer In Charge can impose a levy upon the contractor upto 5% of the total contract value for the delay in handing over the vacant possession of the completed works after giving a 15 (fifteen) days notice to the contractor.

xviii) a) INSURANCE : The contractor shall take full responsibility to take all precautions to prevent loss or damage to the works or part thereof for any reasons whatsoever (excluding act of God e.g. flood, riots, war, earthquake, etc.) and shall at his own cost repair and make good the loss/damage to the work so that on completion, the work shall be in good order and condition and in conformity with the requirements of the contract and instructions of the Engineer In Charge.
In case of construction works without limiting the obligations and responsibilities under the contract, the contractor shall take insurance policy for the total value of work for the period from commencement to completion including defect liability period against risk of loss/damage to the extent as permissible under the law of insurance.

The contractor shall arrange necessary insurance and pledge the same in the name of the company and all moneys payable by the insurers shall be recovered by the company which shall be paid to the contractor in installments as may be certified by the Engineer In Charge for the purpose of rebuilding or replacement or repair of the works and/or goods destroyed or damaged for which payment was received from the insurers.

b) Where any company building or part thereof is used, rented or leased by the contractor for the purpose of storing or using materials of combustible nature, the contractor shall take separate insurance policy for the entire building and the policy shall be deposited with the company.

c) The contractor shall at all times during the tenure of the contract indemnify the company against all claims, damages or compensation under the provision of the Workmen's Compensation Act and shall take insurance policy covering all risk, claims, damages, or compensation payable under the Workmen's Compensation Act or under any other law relating thereto.

d) The contractor shall ensure that the insurance policy/policies is/are kept alive till full expiry of the contract by timely payment of premiums and it/they shall not be cancelled without the approval of the company and a provision is made to this effect in all policies, and similar insurance policies are also taken by his sub-contractors if any. The cost of premium shall be borne by the contractor and it shall be deemed to have been included in the tendered rate.

e) In the event of contractor’s failure to effect or to keep in force the insurance referred to above or any other insurance which the contractor is required to effect under the terms of the contract, the company may effect and keep in force any such insurance and pay such premium/premiums as may be necessary for that purpose from time to time and recover the amount thus paid from any moneys due to the contractor.

THE CLAUSE 12 xviii SHALL BE APPLICABLE FOR WORKS OF ESTIMATED VALUE OF OVER Rs. 50 LAKHS.

xix) Setting Out: The contractor shall be responsible for the contract and proper setting out of the works and correctness of the position, reduced levels, dimensions and alignment of all parts of the work including marking out the correct lay out in reference to the permanent bench mark and reference points. Only one permanent bench mark and basic reference lines shall be marked and shown to the contractor as basic data.

The contractor shall have all necessary instruments, appliances and labour in connection therewith. If at any time during the progress of work any error is detected in respect of the position, levels, dimensions or alignment of any part of the work, the contractor on being required to do so by the Engineer In Charge or his representative shall at the expenses of the contractor rectify such errors to the satisfaction of Engineer In Charge unless such error is due to incorrect data supplied by the Engineer In Charge.

xx) On receipt of Letter of Acceptance of Tender / Work Order the contractor shall forthwith Register and obtain License from the competent authority under the Contract Labour (Regulation & Abolition) Act 1970, the Contract Labour (Regulation & Abolition) Central Rules, 1971 and submit certified copies of the same to the Engineer In Charge and the Principal Employer.
xxi) The contractor shall be registered with the concerned State Govt. and the Central Govt. in respect of Sales Tax Act and the certificate having details of Registration No., period of validity etc. should be submitted to the Engineer In Charge.

xxii) The contractor shall, in connection with works, provide and maintain, at his own cost, all lights, security guards, fencing when and where necessary as required by the Engineer In Charge for the purpose of protection of the works, materials at site, safety of workmen and convenience of the public.

xxiii) All materials (e.g. stone, moorum and other materials) obtained in the course of execution of the work during excavation and dismantling etc. shall be the property of the company and the same may be issued to the contractors, if required for use in the works at the rates to be fixed by the Engineer In Charge.

xxiv) Unless otherwise specifically provided for, dewatering of excavation pits, working areas etc. shall be the contractor's responsibility and is to be carried out at his own cost as per instructions of EIC. The rates quoted by the contractor shall be deemed to include the dewatering costs.

xxv) Approval by the Nodal Officer/Engineer in Charge or his nominee: The contractor shall submit specifications and drawings showing the proposed temporary work to the Nodal Officer/Engineer-in-Charge or his nominee, who is to approve them if they comply with the specifications and drawings.

The contractor shall be responsible for design of Temporary Works.

The Nodal Officer/Engineer-in-charge or his nominee’s approval shall not alter the contractor’s responsibility for design of the Temporary Works.

13. Defects Liability Period:

In addition to the defect/s to be rectified by the contractor as per terms of the contract/ work order, the contractor shall be responsible to make good and remedy at his own expense the defect/s mentioned hereunder within such period as may be stipulated by the Engineer In Charge in writing:

a) Any defect/defects in the work detected by the Engineer In Charge within a period of 6 (six) months from the date of issue of defect liability certificate/completion certificate.

b) In the case of building works or other works of similar nature any defect in the work detected by the Engineer In Charge within a period of 6 (six) months from the date of issue of defect liability certificate/completion certificate or before the expiry of one full monsoon period i.e. June to October whichever is later in point of time.
13.1 A programme shall be drawn by the contractor and the Engineer In Charge for carrying out the defects by the contractor detected within the defect liability period and if the contractor fails to adhere to this programme, the Engineer In Charge shall be at liberty to procure proper materials and carry out the rectifications in any manner considered advisable under the circumstances and the cost of such procurement of materials and rectification work shall be chargeable to the contractor and recoverable from any of the pending dues of the contractors.

The defect liability period can be extended by the company on getting request from the contractor only for valid reasons.

There will be no defect liability period for works like Grass Cutting, Jungle Cutting, Surface Dressing & any other work of similar nature to be decided by the Engineer in Charge.

14. Operating and Maintenance Manual:

If “as built” drawings and/or Operating and Maintenance Manual are required the contractor shall supply them by the dates as per instruction of the Engineer-in-charge.

If the contractor does not supply the drawings and/or Manual by the dates as stated above, or they do not receive the Nodal Officer or his nominee’s approval, the Nodal Officer or his nominee shall withhold the amount as stated in the agreement.

15. Settlement of Disputes/Arbitration:

15.1 It is incumbent upon the contractor to avoid litigation and disputes during the course of execution. However, if such disputes take place between the contractor and the department, effort shall be made first to settle the disputes at the company level. The contractor should make request in writing to the Engineer-in-Charge for settlement of such disputes/claims within 30 (thirty) days of arising of the cause of dispute/claim failing which no disputes/claims of the contractor shall be entertained by the company.

15.2 If differences still persist, the settlement of the dispute with Govt. Agencies shall be dealt with as per the Guidelines issued by the Ministry of Finance, Govt. of India in this regard. In case of parties other than Govt. Agencies, the redressal of the dispute may be sought in the Court of Law.

16. Period of Work:

(a) Design, Supply, Installation, Testing, Trial run and Commissioning : 120 days
(b) Warranty Period : 1 year
(c) Annual Maintenance Contract : 5 years
ADDITIONAL TERMS AND CONDITIONS

The following additional terms and conditions are also acceptable to the company. The tenderers are requested not to quote any further additional conditions in the tender.

1. **Mobilisation Advance**
   
   i) No mobilization advance is payable for works whose estimated value is less than Rs.100.00 lakhs.

   ii) In the case of turn key work whose estimated value is more than Rs.100 lakhs a maximum of 10% of the total contract value of work will be paid as mobilisation advance subject to submission of Bank Guarantee for equal amount.

   iii) In case of other civil works valued more than Rs.100 lakhs mobilisation advance will be paid upto 5% of the contract value subject to the condition that submission of Bank Guarantee taken towards security of ‘Mobilization Advance’, shall be at least 110% of the advance.

   iv) However, such mobilisation advance will carry interest on the basis of CIL’s borrowing rate under cash credit arrangement as varying from time to time.

   v) The mobilisation advance shall be recovered from the bills of the contractor from the 2nd running account bill onwards @ 20% of the advance amount paid and full recovery would be ensured before or with the Final Bill.

   vi) The value of Bank Guarantee may be reduced to the extent such advance is recovered by the company subject to the conditions that the value of Bank Guarantee amount at any time is more than the recoverable outstanding advance. Bank Guarantee shall be irrevocable and from a Bank as per the list provided with the document.

   vii) The Mobilization advance shall not be paid in less than two installments except in special circumstances for the reasons to be recorded.

2. **Application of Price Variation Clause.**

   Prices quoted in the offer will be fixed throughout the period of the contract. Price variation clause will not be applicable in this contract.
ANNEXURE - I

SPECIMEN OF LETTER OF CONTRACTOR’S ACCEPTANCE OF PROVISIONAL REDUCTION OF RATE FOR SUBSTANDARD WORK.

No.   dated:

To
……………………………….
……………………………….

Sir,

Subject: (Complete name of work)…………………………

Reference: Your letter No……………………………………

I/We have carefully read the terms and conditions offered in your letter dated…………… and they are acceptable to me/us.

Pending the decision of the Engineer in Charge of the final rates of payment against the items of work specified in the statement attached to your above letter, which will be final and binding, I/We agree to the same being paid at the provisional rates indicated against each of the said item of work for the above work as mentioned in your statement.

Yours faithfully,

Contractor(s)
PROFORMA OF BANK GUARANTEE FOR REMOVAL OF PLANT & EQUIPMENT FROM THE SITE OF COAL INDIA LIMITED/SUBSIDIARY COMPANY.

In consideration of Coal India Limited/Subsidiary Company (thereafter called “the Company” which expression shall repugnant to the subject or context includes its successors and assigns) having agreed to under the terms & conditions of the Contract No.……….. dated………….. entered into between the company and M/s……………….. having its Office at………. (hereinafter called “the Contractor”) to permit the Contractor to remove the plant & equipment as fully described in the Schedule of the Hypothecation Deed dated…………. executed by the Contractor in favour of the Company from the site to any other works of the Contractor on its furnishing the Bank Guarantee for Rs………….. we, the……………. Bank (hereinafter referred to as the said Bank) having its Registered Office at ………………… do hereby undertake and agree to pay the Company to the extent of Rs. …………… on demand stating that the amount claimed by the Company is due and payable by the contractor for its failure in bringing back the said plant & equipment or any part thereof to the site and to unconditionally pay the amount claimed by the company on such demand without any demur to the extent aforesaid.

We, the……………. Bank agree that the Company shall be the sole judge as to whether the said contractor has failed/neglected in bringing back the plant & equipment to the site and the amount has become due for such failure and the decision of the company in this behalf shall be final and binding on us.

We, the said Bank further agree that the Guarantee herein contained shall remain in full force and effect upto………………… and any claim received after the said date shall in no case be bind the Bank.

Notwithstanding anything contained herein the liabilities of the said Bank under this Guarantee are restricted to Rs………………. and this Guarantee shall come into force from the date thereof and shall remain in full force and effect till ……………….. unless the written demand or claim under this guarantee is made by the company with us on or before…………. all the rights of the Company under this guarantee shall cease to have any effect and we shall be retrieved and discharged our liabilities hereunder.

We, the said Bank lastly undertake not to revoke this guarantee under its currency except with the previous consent of the Company in writing and agree that any change in the constitution of the said Contractor or the said Bank shall not discharge the liabilities hereunder.

This Guarantee is issued by Sri……………… who is authorized by the Bank.

Under jurisdiction of…………….. Court only.
ANNEXURE III

PROFORMA OF BANK GUARANTEE IN LIEU OF SECURITY DEPOSIT.

M/s. Coal India Limited,
10, Netaji Subhas Road,
Kolkata

Or

(Name of the Subsidiary Company with address).

Dear Sir,

In consideration of M/s. Coal India Limited/Subsidiary Company having its Registered Office at ………. (hereinafter called “the Company” which expression shall unless repugnant to the subject or context includes its successors and assigns) having agreed under the terms and conditions contained in letter No………… dated………… issued in favour of M/s. …………. for ………. (hereinafter referred to as “the contract” to accept the Deed of guarantee as herein provided for Rs………. from the Schedule/ Nationalised Bank in lieu of security deposit to be made by M/s… ……. (hereinafter called “the Contractor”) or in lieu of deduction to be made from the contractor’s bill, for the due fulfillment of the terms and conditions contained in the said contract by the contractor, we the ………. Bank (hereinafter referred to as the said Bank) having its Registered Office at………… do hereby undertake and agreed to pay the Company to the extent of Rs………… on demand stating that the amount claimed by the company is due and payable by the contractor for the reasons of failure/negligence in performing the terms and conditions contained in the contract by the buyer and to unconditionally pay the amount claimed by the company on demand without any demur to the extent aforesaid.

We………… Bank agree that the company shall be the sole judge as to whether the said contractor has failed/neglected in performing any of the terms and conditions of the said contract and the decision of the company in this behalf shall be final and binding on us.

We the said Bank further agree that the Guarantee herein contained shall remain in full force and effect upto ……….. and any claim received after the said date shall in no case bind the Bank.

The Company shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee or indemnity from time to time vary any of the terms and conditions of the said contract or to extend the time of performance by the said contractor or to postpone any time and from time to time any of the powers exercisable by it against the said contractor and either to enforce or to forbear from enforcing any of the terms and conditions governing the said contract or securities available to the company and the said Bank shall not be released from its liability under these presents.
Notwithstanding anything contained herein the liability of the said Bank under this guarantee is restricted to Rs……. and this Guarantee shall come into force from the date hereof and shall remain in full force and effect till … …… Unless the written demand or claim under this guarantee is made by the Company with us on or before ……… all rights of the company under this guarantee shall cease to have any effect and we shall be relieved and discharged from our liabilities hereunder.

We the said Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing and agree that any change in the constitution of the said contractor or the said bank shall not discharge our liability hereunder.

This guarantee issued by Sri …………….. who is authorised by the Bank.

Under jurisdiction of …………………………. court only.

The guarantee is operative at ___________________Bank, Sambalpur Branch of Odisha, India.

The Postal address, Telephone no., FAX No. and e-Mail address of the both the outstation Bank issuing the BG and Local operating Branch are as under:-

Postal Address of the Outstation Bank issuing the BG –

Telephone No. of the Outstation Bank issuing the BG –

FAX No. of the Outstation Bank issuing the BG – e-

MAIL address of the Outstation Bank issuing the BG –

Postal Address of the Local Operating Branch Telephone

No. of the Local Operating Branch

FAX No. of the Local Operating Branch e-

MAIL address of the Local Operating Branch
ANNEXURE IV
PROFORMA OF BANK GUARANTEE FOR PERFORMANCE SECURITY
OF THE CONTRACT

To

…………………………..
…………………………..

Re:  Bank Guarantee in respect of Contract No………....
Dated……………. Between ……………… (name of the )
and ………………………………….. (name of the Contractor)

M/s. …………. (Name and address of the Contractor) (hereinafter called “the Contractor” with M/S. …………. (name of the Company) (hereinafter called “the Company”) to execute ……………. (name of the contract and brief description of work) on the terms and conditions contained in the said contract.

It has been agreed that the Contractor shall furnish the Bank Guarantee from a Nationalised bank for a sum of Rs………….. as security for due compliance and performance of the terms and conditions of the said contract.

The ……… (name of the Bank) having its Office at…….. has at the request of the Contractor agreed to give the Guarantor hereinafter contained.

We, the ……….………. Bank (hereinafter called “the Bank”) do hereby unconditionally agreed with the Company that if the contractor shall in any way fail to observe or perform the terms and conditions of the said contract or shall commit any breach of its obligation thereunder, the Bank shall on demand and without any objection or demur to pay to the company the said sum of Rs……… ……. or such portion as shall then remain due with interest without requiring the Company to have recourse to any legal remedy that may be available to it to compel the Bank to pay the sum, or failing on the company to compel such payment by the contractor.

Any such demand shall be conclusive as regards the liability of the Contractor to the company and as regards the amount payable by the Bank under this Guarantee. The Bank shall not be entitled to withhold payment on the ground that the Contractor has disputed its liability to pay or has disputed the quantum of the amount or that any arbitration proceeding or legal proceeding is pending between the company and the Contractor regarding the claim.

We, the ………………. Bank further agree that the Guarantee shall come into force from the date hereof and shall remain in force and effect till the period that will be taken for the performance of the said Contract which is likely to be ……………. day of ……………. but if the period of Contract is extended either pursuant to the provisions in the said contract or by mutual agreement between the contractor and the company the Bank shall renew the period of the Bank Guarantee failing which it shall pay to the company the said sum of Rs……………. or such lesser amount of the said sum of Rs…………….. as may be due to the company and as the company may demand.
This Guarantee shall remain in force until the dues of the company in respect of the said sum of Rs.………………. and interest are fully satisfied and the Company certifies that the Contract has been fully carried out by the Contractor and discharged the guarantee.

The Bank further agrees with the company that the company shall have the fullest liberty without consent of the Bank and without affecting in any way the obligations hereunder to vary any of the terms and conditions of the said contract or to extend time for performance of the said contract from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the contractor and to forebear to enforce any of the terms and conditions relating to the said Contract and the Bank shall not be relieved from its liability by reason of such failure or extension being granted to the Contractor or to any forbearance, act or omissions on the part of the company or any indulgence by the Company to the Contractor or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect or relieving or discharging the Guarantor.

The Bank further agrees that in case this Guarantee is required for a longer period and it is not extended by the Bank beyond the period specified above the Bank shall pay to the company the said sum of Rs.…………….. or such lesser sum as may then be deemed to the Company and as the Company may require.

Notwithstanding anything contained herein the liability of the Bank under this Guarantee is restricted to Rs.……………. the guarantee shall remain in force till the day …………… of …………… and unless the guarantee is renewed or claim is preferred against the bank within six months from the said date all rights of the Company under this guarantee shall cease and the Bank shall be relieved and discharged from all liabilities hereunder except as provided in the preceding Clause.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.

The Bank has under its constitution power to give this Guarantee and Sri…………………….. who has signed it on behalf of the Bank has authority to do so.

Dated., this …………. day of ……………

Signature of the authorized person

For and on behalf of the Bank

Place

Under jurisdiction of …………………. court only.

(This is applicable for Turn Key Contracts Only)
ANNEXURE V

PROFORMA OF BANK GUARANTEE FOR MOBILISATION/
LUMP-SUM ADVANCE.

M/S. Coal India Limited,
10, Netaji Subhas Road,
Calcutta

Or

(Name of the Subsidiary Company with address).

Dear Sir,

In consideration of M/S. Coal India Limited/Subsidiary Company having its
Registered Office at ............ (hereinafter called “the Company” which expression shall
unless repugnant to the subject or context includes its successors and assigns) having agreed
under the terms and conditions of the contract no............ dated............ entered
into between Coal India Limited/Subsidiary Company and M/s............ having its
Registered Office at ............. (hereinafter called “the Contractor” to make mobilization
advance lump-sum advance to the tune of Rs............ subject to submission of the Bank
Guarantee for equal amount from any Nationalised Bank( referred to as the said
Bank)having its registered Office at ............. do hereby undertake and agree to pay the
company to the extent of Rs............ on demand stating that the amount claimed by the
Company is due and payable by the contractor for the reasons of non refund and or non-
recovery of the amount with interest thereon and to unconditionally pay the amount claimed
by the company on such demand without any demur to the extent aforesaid.

We…… …… Bank agree that the company shall be the sole judge as to whether
the said contractor has failed/neglected in performing any of the terms and conditions of the
said contract and the decision of the company in this behalf shall be final and binding on us.

We the said Bank further agree that the Guarantee herein contained shall remain in
full force and effect upto ............ and any claim r eceived after the said date shall in no
case bind the Bank.

The Company shall have the fullest liberty without affecting in any way the
liability of the Bank under this guarantee or indemnity from time to time vary any of the
terms and conditions of the said contract or to extend the time of performance by the said
contractor or to postpone any time and from time to time any of the powers exercisable by it
against the said contractor and either to enforce or to forbear from enforcing any of the
terms and conditions governing the said contract or securities available to the company and
the said Bank shall not be released from its liability under these presents.
Notwithstanding anything contained herein the liability of the said Bank under this guarantee is restricted to Rs…….. and this Guarantee shall come into force from the date hereof and shall remain in full force and effect till ……….. Unless the written demand or claim under this guarantee is made by the Company with us on or before ……….. all rights of the company under this guarantee shall cease to have any effect and we shall be relieved and discharged from our liabilities hereunder.

We the said Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing and agree that any change in the constitution of the said contractor or the said bank shall not discharge our liability hereunder.

This guarantee issued by Sri ………………. who is authorised by the Bank.

Under jurisdiction of …………. Court only.
ANNEXURE. VI

PROFORMA for AFFIDAVIT to be submitted by L-1 Bidder (On a Non-Judicial Stamp Paper of Rs.10) for genuineness of the information furnished on-line and authenticity of the documents uploaded online in support of his Eligibility:

FORMAT OF AFFIDAVIT

I/We, ____________________________________, Partner/Legal Attorney/Authorized Representative of Sri/Smt./M/s.___________________________(Name of bidder), solemnly declare that:

1. I/We have submitted Tender for the Work _____________________________
   ____________________________________ against NIT No./Tender ID _______
   ____________ dated ____________.

2. All information furnished by me/us on-line in respect of fulfillment of eligibility criteria and qualification information of this Tender is complete, correct and true.

3. All scanned copy of documents uploaded by me/us in support of the information furnished online by me/us towards eligibility, are valid and authentic.

4. If any information furnished by me/us on-line and scanned copy of documents uploaded in support of the information furnished online by me/us towards eligibility, is found to be false/incorrect at any time, the department may cancel my Tender and action as deemed fit may be taken against me/us, including termination of the contract, forfeiture of Earnest Money and banning/delisting of our firm and all partners of the firm for a minimum period of 01(one) year.

5. I/We have never been banned or delisted by any Govt. or Quasi Govt. Agency or any Public Sector Undertaking.

   OR

I/We have been banned by the organization named “__ _________________” for a period of ___________ year/s, effective from __________ to ____________.
ANNEXURE-VII

PROFORMA FOR EXECUTION OF AGREEMENT.

STAMP PAPER.

This agreement is made on ………………. day of …………….. between ( Name of Company ) having its registered office at ………………. (hereinafter called the ‘COMPANY’ which expression shall, unless repugnant to the subject or context, include its successors and assignees) of the one part and ( Name of the Contractor ) carrying on business as a ( partnership/proprietorship/ Ltd. Co. etc. ) firm under the name and style …………………………………. (hereinafter called the ’said Contractor’ which expression shall, unless the context requires otherwise include them and their respective heirs, executors, administrators and legal representatives) of the other part.

Whereas the Company invited tenders for the work of ………………………………………………, and whereas the said Contractor/Firm submitted tender for the said work and deposited a sum of Rs………………….. as Earnest Money and whereas the tender of the said contract has been accepted by the Company for execution of the said work.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1) In this agreement words and expressions shall have the same meaning as are repsectively assigned to them in the tender papers hereinafter referred to.

2) The following documents which are annexures to this agreement should be deemed to form and be read and construed as part of this agreement viz.

i) Annexure-A Tender Notice (Page .. to ..)

ii) Schedule – A General terms & conditions. Special conditions and General technical specification (Page …. to …)

iii) Schedule-B The probable Quantities and Amount (Page ..to …)

iv) Schedule-C Negotiation letters –

iv) Schedule-D Letter of Acceptance/Work Order (Page .. to ..)

v) Schedule-E Drawings (Page .. to ..)
3) In consideration for the payment of the sum of Rs…….( W/O Value; both in words and figures ) or such other sum as may be arrived at under the clause of the specification relating to Payment by items measurements at unit prices by the Company, the said Contractor shall, subject to the terms & condition contained herein execute and complete the work as described and to the extent of probable quantities as indicated in Schedule B with such variations by way of alteration, addition to or reduction from the said works.

4. Performance security i.e. First part of security:- The company has converted a sum of Rs………………………… Only deposited by the said contractor as Eartnest Money vide DD No./BG No.(valid upto) into a part of Performance Security Deposit of 5% of the awarded work value. The balance of Rs…….. upto 5% of the work order value has been deposited by the contractor vide DD no./BG No.(valid upto). The total performance security including EMD is @5% of the total award value of the work. The security deposit amount shall not carry any interest.

5. Retention money i.e. Second part of security:-The second. Part of security i.e. retention money @5% of the executed work value is to be recovered from each running bills and release of both the aforesaid security deposit will be dealt as per clause no.4 of General terms and conditions.

IN WITNESS WHEREOF THE parties herein have set their hands and seals the date and year above written.

1 Partner. 
2 Partner

On behalf of M/S……………………………….. 
The Contractor, as one of the constituted attorney, 
In the presence of –

1. Name _____________________________ Signature 

Address :

Occupation :

Signed by Sri ………on behalf of ( Name of Company) in presence of - 

1. Name : Signature 
2. Address: .
ANNEXURE-VIII

PROFORMA OF BANK GUARANTEE IN LIEU OF EARNEST MONEY.

M/s. Coal India Limited
10, Netaji Subhas Road,
Calcutta

Or

………………………………………………….
(Name of the Subsidiary Company with address).

Dear Sir,

In consideration of The………………………………having its Regi
stered Office at
……………………………… (hereinafter called “the Company” whic
h expression shall unless repugnant to the subject or context includes its successors and assigns) having agreed to exempt M/s.……………………….. having its Registered Office at …………  ……………. (hereinafter
called “the said tenderers” which expression shall unless repugnant to the subject or context includes its successors and assigns) from the deman
d under the terms and conditions of Tender No.…………….. for ……………….. (hereinafter called “the said Tender”) of each earnest money
for the due fulfillment of the terms and conditions contained in the said Tender by the said
Tenderer on production of Bank guarantee for Rs…………  ……….). We ……………….. Bank
(hereinafter referred to as “the Bank”) do hereby undertake to pay to the company an amount not exceeding Rs……………….

2) We, ……………. Bank do hereby undertake to pay an amount due and payable under this guarantee without any demur merely on a demand from the company stating that the amount claimed is due from the tenderer for the reason of breach by the said tenderer of any of the terms and conditions contained in the said Tender or for the reason of the Tenderer failing to keep the Tender open. Any such demand made on the Bank shall be conclusive. As regard the amount due and payable by the Bank under this Guarantee shall be restricted to an amount not exceeding Rs………………..

3)We, the said Bank further agree that the Guarantee herein contained shall come into force from the date hereof and shall remain in full force and effect till a demand or claim under this Guarantee is made on us in writing on or before the …………………………. We shall discharge from all liability under this Guarantee thereafter.

4) We, the said Bank lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the company in writing and agree that any change in the constitution of the said Tenderer or the Bank shall not discharge our liability hereunder.
5. This guarantee is issued by Sri ……………….. who is authorized by the Bank.

Under jurisdiction of ……………………. court only.

The guarantee is operative at ________________ Bank, Sambalpur Branch of Odisha, India.

The Postal address, Telephone no., FAX No. and e-Mail address of the both the outstation Bank issuing the BG and Local operating Branch are as under:-

Postal Address of the Outstation Bank issuing the BG –
Telephone No. of the Outstation Bank issuing the BG –
FAX No. of the Outstation Bank issuing the BG – e-
MAIL address of the Outstation Bank issuing the BG –
Postal Address of the Local Operating Branch Telephone
No. of the Local Operating Branch
FAX No. of the Local Operating Branch e-
MAIL address of the Local Operating Branch
ANNEXURE-IX

MANDATE FORM FOR ELECTRONIC FUND TRANSFER/INTERNET BANKING PAYMENT.

To
The Mahanadi Coalfields Limited,
Jagruti Vihar,
Burla, Sambalpur-768020.

Dear Sir,

Sub: Authorisation for release of payment due from Mahanadi Coalfields Limited, Burla through Electronic Fund transfer/Internet Banking.
(SBI-NET)

Ref: Order No.__________ Date _________ and/or Tender/Enquiry/Letter No. _________
Date ___________
(Please fill in the information in CAPITAL LETTERS, Please TICK wherever it is applicable).

1. Name of the Party : _________________________________________________

2. Address of the Party : _________________________________________________

City _______________________ PIN Code____________
E- Mail Id _____________________________________
Permanent Account Number ________________________________________

3. Particulars of Bank

<table>
<thead>
<tr>
<th>Bank Name</th>
<th>Branch Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch Place</td>
<td>Branch City</td>
</tr>
<tr>
<td>PIN Code</td>
<td>Branch Code</td>
</tr>
<tr>
<td>MICR No.</td>
<td></td>
</tr>
</tbody>
</table>

(9 Digits code number appearing on the MICR Band of the cheque supplied by the Bank. Please attach Xerox copy of a cheque of your bank for ensuring accuracy of the bank name, branch name and code number)

RTGS CODE __________________________

<table>
<thead>
<tr>
<th>Account Type</th>
<th>Savings</th>
<th>Current</th>
<th>Cash Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Number(as appearing in the Cheque Book)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Date from which the mandate should be effective.

I hereby declare that the particulars given above are correct and complete. If any transaction is delayed or not effected for reasons of incomplete or incorrect information. I shall not hold Mahanadi Coalfields Limited responsible. I also undertake to advise any change in the particulars of my account to facilitate updation of records for purpose of credit of amount through SBI Net.

Place :
Date :

Signature of the party/Authorized Signatory.

Certified that the particulars furnished above are correct as per our records.

Banker’s Stamp :
Date :
(Signature of the Authorised official from the Banks)
ANNEXURE-X

Existing commitments and on going works

<table>
<thead>
<tr>
<th>Description of work</th>
<th>Place &amp; State</th>
<th>Contract No.&amp; Date</th>
<th>Name and address of Employer</th>
<th>Value of Contract (Rs.lakh)</th>
<th>Stipulated period of completion</th>
<th>Value of works remaining to be completed</th>
<th>Anticipated date of completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
</tr>
</tbody>
</table>
ANNEXURE-XI

FORMAT OF “Letter of Bid”

LETTER HEAD OF BIDDER (As enrolled on the e-Procurement Portal of MCL)

To
The Tender Committee
Mahanadi Coalfields Limited

Sub.:
Letter of Bid for the work Design, Supply, Installation, Testing, Trial Run and Commissioning with Comprehensive AMC for five years after one year warranty period of an IP Network based CCTV Surveillance System on Turnkey basis at Regional Stores of Bharatpur Area, Hingula Area, Lingaraj Area, Talcher Area, Ib Valley Area, Orient Area, BG Area, Central/Regional Store of Jagannath Area, Lankanpur Area and Central Workshop, Talcher and Central Workshop, Ib Valley of Mahanadi Coalfields Ltd.

Ref.:
2. Tender ID No.:

Dear Sir,

I/We offer to execute the work as per our offered bill of quantity in accordance with the conditions of the NIT document as available in the website.

This Bid and your subsequent Letter of Acceptance/Work Order shall constitute a binding contract between us.

I/We hereby confirm our acceptance of all the terms and conditions of the NIT document unconditionally.

If any information furnished by me/us online towards eligibility in this tender is found to be incorrect at any time, penal action as deemed fit may be taken against me/us for which I/we shall have no claim against MCL.

(This document is digitally signed by the DSC holder authorized by the bidder and therefore no physical signature is required).
Continuation of Clause No. 2.4:

The Bank Guarantee is acceptable against deposit for ‘Abnormally Low Rated (ALR)’ Items, subject to following conditions:-

i)  If the deposit against ‘ALR’ items is provided by the successful bidders in the form of BG, it shall be issued either -

   (i)  at Bidder’s option by a nationalized/Scheduled Indian Bank or by a foreign bank located in India and acceptable to the employer, subject to the condition that Bank Guarantees issued by outstation Banks shall be operative at their Sambalpur Branch of Odisha, India.

   (ii) the validity of the Bank Guarantee shall be atleast ninety days beyond the period of contract. The period of contract for this purpose is (Design, Supply, Installation, Testing, Trial Run and Commissioning period 4 months + warranty period one year + AMC period 5 years) = 6 years 4 months = 76 months. Hence the validity Bank Guarantee shall be for a period of 76 months + 3 months = 79 months from the date of agreement.

   (iii) No extension of Bank Guarantee for a period of less than 3(Three) months shall be accepted.

ii)  The format of BG shall be same as that of the format of Performance Security Deposit.

iii) The deposit against ‘ALR’ items, if provided by the bidder in the form of BG, should be refunded within 14 days of defect liability certificate (taking over certificate with a list of defects).

iv)  Bank guarantee for any purpose shall be accepted for amount Rs.5.00 lakhs and above only. Amount less than Rs.5.00 lakhs shall be deposited in other modes as mentioned in the NIT.
INTEGRITY PACT

Between

Mahanadi Coalfields Limited (MCL) hereinafter referred to as “The Principal”

And

__________________________________ hereinafter referred to as the “The Bidder / Contractor

Preamble

The Principal intends to award, under laid down organizational procedures, contracts for _____________. The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its bidder/s and Contractor/s.

In order to achieve these goals, the Principal cooperates with the “International Non-Governmental Organization” “Transparency International” (TI). Following TI’s national and international experience, the Principal will appoint an external Independent Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

1. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.

2. The Principal will, during the tender process treat all Bidders with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.

3. The Principal will exclude from the process all known prejudiced persons.
(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder/contractor

(1) The Bidder/Contractor commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

1. The Bidder/Contractor will not, directly or through any other person or firm offer, promise or give to any of the Principal’s employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2. The Bidder/Contractor will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

3. The Bidder/Contractor will not commit any offence under the relevant Anti-corruption Laws of India; further the Bidder/Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

4. The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
(2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder, before contract award has committed a transgression through a violation of Section 2 or in any other form such as to put his reliability or credibility as Bidder into question, the Principal is entitled to disqualify the Bidder from the tender process or to terminate the contract, if already signed, for such reason.

(1) 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 Principal is entitled also to exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular 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 6 months and maximum of 3 years.

(2) The Bidder accepts and undertakes to respect and uphold the Principal’s absolute right 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.

(3) If the Bidder/Contractor can prove that he has restored/recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.

(4) A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.
Section 4 – Compensation for Damages

(1) If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from the Bidder liquidated damages equivalent to 3% of the value of the offer or the amount equivalent to Earnest Money Deposit/Bid Security, whichever is higher.

(2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the Contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee whichever is higher.

(3) The bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount of the liquidated damages, the Bidder/Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

Section 5 – Previous transgression

(1) The Bidder declares that no previous transgressions occurred in the last 3 years with any other Company in any country conforming to the TI approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

(2) If the bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 – Equal treatment of all Bidders/Contractors/Subcontractors

(1) The Bidder/Contractor undertakes to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
(2) The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Subcontractors.

(3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidders / Contractors / Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Vigilance Office.

Section 8 – External Independent Monitor / Monitors (three in number depending on the size of the contract) (to be decided by the Chairperson of the Principal).

(1) The Principal appoints competent and credible external independent 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.

(2) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal.

(3) The Contractors accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal 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 documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Contractor/Subcontractor with confidentiality.

(4) The Principal 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 Principal 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 Principal and request the Management to discontinue or heal the violation, 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.

(6) The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to him by the ‘Principal’ and, should the occasion arise, submit proposals for correcting problematic situations.

(7) Monitor shall be entitled to compensation on the same terms as being extended to/provided to Outside Expert Committee members/Chairman as prevailing with Principal.

(8) If the Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not, within the reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

(9) The word ‘Monitor’ would include both singular and plural.

Section 9 – Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Chairperson of the Principal.
Section 10 – Other Provisions

(1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. Sambalpur.

(2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

(3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

(4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

______________________  ________________________
For the Principal                 For the Bidder/Contractor

Place: ___________________  Witness 1: ___________________
Date: ___________________    Witness 2: ___________________
**CMPF / EPF CLAUSE**

(i) If the contractor deploys labourers for less than 30 days, he has to submit an affidavit to the effect that he has not engaged any contractual labourer beyond 30 days during execution of work in the said contract and the same has also to be certified by the authority issuing labour payment certificate as well as bill accepting authority prior to payment of final bill.

(ii) If the case does not fall in (i) above, the contractor has to deposit amount in CMPF/EPF as per the provisions and necessary proof of payment of PF dues is to be submitted before the authority issuing labour payment certificate as well as bill accepting authority prior to the payment of final bill. The payment against the PF (Contractor’s share only) is reimbursable to the contractor on submission of proof of payment.
SAFETY CODES
(Additional Safety measures to be taken by the Contractor)

(i) Suitable scaffold should be provided for workmen for all works that cannot safely be done from the ground or from solid construction except for such short period of work as can be done safely from ladders. When a ladder is used an in carrying materials as well, suitable foot holds and hand holds shall be provided on the ladder. The ladder shall be given an inclination not steeper than used 1/4.

(ii) Scaffolding or staging more than 3.60 metres above the ground or floor, swung or suspended from & overhead support or erected with stationary support shall be having a guard rail properly attached, bolted, braced and otherwise secured atleast 0.90m above floor or platform of such scaffolding on staging and ends thereof with only such opening as may be necessary for the delivery of materials; Such scaffolding or staging shall be so fastened as to prevent it from a swaying from the building or structure.

(iii) Working platform, gangways and stairways should be so constructed that they should not gap unduly or unequally and if the height of the platform or the gangway or the stairway is more than 3.60m above ground level or floor level, they should be closely board should have adequate width and should be suitable fenced as described in (i) above.

(iv) Every opening in the floor of building or in working platform be provided with suitable means to prevent the fall of persons, materials by providing suitable fencing or railing whose minimum height shall be 0.90m.

(v) Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be provided security fixed. No portable single ladder shall be over 9m. in length, while the width between side rails in rung ladder shall in case be less than 0.29m for ladder upto and including 3.0m in length. For longer ladder this width should be increased at least 1/4% for each additional foot of length uniform step spacing shall not be exceeding 0.30m. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sisters of work be stacked or placed as to cause danger or incovenience to any person of the public. The contractor shall also provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit. Action or other proceedings at all that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit, action or proceeding to any such person or which may with the consent of the contractor, he has paid to compromise any claims by any such person.

(vi) All trenches 1.20m or more depth shall at all times be supplied with atleast one ladder for each 30m. in length or traction thereof. Ladder shall be extended from bottom of the trench to at least 0.08m above surface of the ground. The side of trenches which are 1.50m or more in depth shall be slopped back to give suitable sloped or securely held by timber branching, so as to avoid danger of side collapse. The excavated materials shall not be placed within 1.50m of the edge of
trench or half of the trench whichever is more. Cutting shall be done from top to bottom, under no circumstances undermining or undercutting shall be done.

(vii) Before any demolition work is commenced and also during the progress of work.

(a) all roads & open areas adjacent to the work site shall either be closed or suitable protected,

(b) no electric cable or apparatus which is liable to be a source of danger or no cable or apparatus used by the operator shall remain electrically charged.

(c) all practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so over loaded with debris or materials as to render it unsafe,

(viii) All necessary personal safety equipment as considered adequate by the Engineer-in-charge should be kept available for use of the person employed on the site and maintained in a condition suitable for immediate use and the contractor should take adequate steps to ensure proper use of equipment by those concerned.

(a) Workers employed on mixing asphaltic materials cement and lime mortars shall be provided with protective footwear and protective goggles.

(b) Those engaged in welding washing and mixing or stacking of cement bags or any material, which is injurious to the eye, shall be provided with protective goggles.

(c) Those engaged in welding work shall be provided with protective goggles etc.

(d) Stone breaker shall be provided with protective goggles and protective clothing & seated at sufficiently safe intervals.

(e) When workers are employed in sewers and manholes, which are in use, the contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into the manholes and the manholes so opened shall be cordoned of with suitable railing and provided with waiting signals or boards to prevent accident to the public.

(f) The contractor shall not employ men below the age of 18 years and woman on the work of painting with products containing lead in any form. Whenever man above the age of 18 years are employed for the work of lead painting the following precautions should be taken:

1. No paint contained lead or products should be used except in the form of paste of readymade paint.

2. Suitable face masks should be supplied for the use of workers when paint is applied in the form of spray or a surface having lead paint dry rubber and scrapped.

3. Oil shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during the process of work.
ix) When the work is done near any place where there is risk of drowning, necessary equipments should be provided and kept ready for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of risk.

x) Use of machines tackle including their attachments, anchores and supports shall confirm to the following standard or conditions:

1] a) Those shall be in mechanical good condition of sound material and adequate strength and free from patent defect and shall be kept in good required and in good working order.

b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality, adequate strength and free from defect.

2] Every crane driver or hoisting appliance operator shall be properly qualified and no person under an age of 21 years should be in charge of any hoisting machine including any scaffold which give signals to the operators.

3] In case of every hoisting machine and on every chain ring hood, shakle swivel and pulleyblock used in hoisting or lowering or as means of suspension the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of hoisting machine having a variable/safe working load of the conditions under which it is applicable shall be clearly indicated. No part of any machine of any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

4] In case of departmental machines, the safe working load shall be notified by the Electrical Engineer-in-charge. As regards contractors machine, the contractor shall notify the safe working load of the machine to engineer-in-charge. Whenever he brings any machinery to site of the work he must get it verified by the Electrical Engineer concerned.

(xi) Gearing, Transmission, Electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguard. Hoisting appliances should be provided with such means as will reduce to minimum risk of accident independent of the load. Adequate precautions should be taken to reduce to the minimum risk of any part of suspended load becoming accidently displaced.

When workers employed on electrical installations which are already energised insulating mats wearing apparel, such as Gloves, sleeves and boots as may be necessary should be provided, the workers should not wear any ring, watch & carry key or other materials which are good conductors of electricity.
(xii) All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder equipment shall be altered or removed while it is used. Adequate washing facilities shall be provided at or near places of work.

(xiii) These safety provisions shall be brought to notice to all concerned by display on a Notice Board at a prominent place at the worksite. The persons responsible for compliance of the safety codes shall be named therein by the contractor.

(xiv) To ensure effective enforcement of the rules and regulations relating to safety precaution the arrangements made by the contractor shall be open to inspection by the Labour Officer, Engineer-in-charge of the department or their representatives.

(xv) Notwithstanding to above clause from (i) to (xiv) there is nothing in these to exempt contractor from the operations of any Act or Rule in force in Republic of India.
<table>
<thead>
<tr>
<th>SL.N o.</th>
<th>Description</th>
<th>UOM</th>
<th>R/S JAG</th>
<th>R/S TALCHER</th>
<th>R/S BH</th>
<th>R/S LINGAR AJ AREA</th>
<th>R/S TALCHER</th>
<th>R/S HINGULA</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>IP PTZ, High definition, Day/Night, Wide Dynamic Range, Dome Camera (including housing &amp; mountings Complete as per specs.) for outdoor installation.</td>
<td>Nos</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>0</td>
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<td></td>
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<tr>
<td>2</td>
<td>2 Mega Pixel, High Definition IP Box/Bullet camera with Built-in IR, PoE &amp; 2 way Audio. (Including Housing &amp; mountings complete as per specs.) for outdoor and indoor installation.</td>
<td>Nos</td>
<td>22</td>
<td>88</td>
<td>38</td>
<td>23</td>
<td>16</td>
<td>14</td>
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<td>3</td>
<td>24 Port Layer-3 Switch as per specs.</td>
<td>Nos</td>
<td>1</td>
<td></td>
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<tr>
<td>4</td>
<td>24 port L2 Managed Switch as per specs</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>L2 Switch, 24 Ports (10/100/1000 BaseT) with PoE and 4 Nos.1G SFP uplink ports as per specs</td>
<td>Nos</td>
<td>7</td>
<td>4</td>
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<td>6</td>
<td>8-Port L2 Industrial Grade Switch with 8 10/100 Base T and 2 SFP as per specs</td>
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<tr>
<td>7</td>
<td>Compatible 1000 Base LX SFP Modules for above switches</td>
<td>Nos</td>
<td>28</td>
<td>26</td>
<td>8</td>
<td>8</td>
<td>6</td>
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<tr>
<td>8</td>
<td>OFC Patch Cord suitable for above switch/SFP module &amp; LIU</td>
<td>Nos</td>
<td>28</td>
<td>26</td>
<td>8</td>
<td>8</td>
<td>6</td>
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<td>9</td>
<td>Media Convertor with suitable fiber patch cords &amp; other accessories as required</td>
<td>Nos</td>
<td>72</td>
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<td>10</td>
<td>2 KVA Online UPS with MF Battery 2 hr Backup.</td>
<td>Nos</td>
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<td>1 KVA Online UPS with MF Batteries for 2 hour backup.</td>
<td>Nos</td>
<td>8</td>
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<td>12</td>
<td>3 KVA Online UPS with SMF Battery 2 hr Backup.</td>
<td>Nos</td>
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<td>Nos.</td>
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<tr>
<td>13</td>
<td>Work station for surveillance monitoring</td>
<td>Nos.</td>
<td>2</td>
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<td>14</td>
<td>Client PC work station with conventional LCD monitor as per specs.</td>
<td>Nos.</td>
<td>2</td>
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<td>15</td>
<td>Minm. 40 inch Flat LED display with wall mount brackets as per specs.</td>
<td>Nos.</td>
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<tr>
<td>16</td>
<td>External Microphone with suitable cable &amp; accessories as required</td>
<td>Nos.</td>
<td>4</td>
<td>4</td>
<td>4</td>
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<tr>
<td>17</td>
<td>External Speaker with suitable cable &amp; accessories as required</td>
<td>Nos.</td>
<td>4</td>
<td>4</td>
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<td>18</td>
<td>Audio Alarm with suitable cable &amp; accessories as required</td>
<td>Nos.</td>
<td>4</td>
<td>4</td>
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<tr>
<td>19</td>
<td>12 core outdoor armoured 9/125 Singlemode optical fiber cable</td>
<td>mtrs</td>
<td>2500</td>
<td>100</td>
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<tr>
<td>20</td>
<td>6 Core outdoor armoured 9/125 Single mode Optical Fiber Cable</td>
<td>Mtrs</td>
<td>850</td>
<td>1200</td>
<td>200</td>
<td>250</td>
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<tr>
<td>21</td>
<td>Cat 6 UTP Cable, 4 pair, 305 mtrs (Roll in a Box Packing), (23 AWG)</td>
<td>Box</td>
<td>6</td>
<td>15</td>
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<tr>
<td>22</td>
<td>Cat 6 STP Cable boxes (305 Mtrs.)</td>
<td>Box</td>
<td>1</td>
<td>10</td>
<td>8</td>
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<tr>
<td>23</td>
<td>27 U floor mount Rack with accessories as per specs.</td>
<td>Nos.</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>24</td>
<td>12 U wall mount rack with accessories as per specs.</td>
<td>Nos.</td>
<td>6</td>
<td>10</td>
<td>3</td>
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<tr>
<td>25</td>
<td>24 - Port LIU, 19&quot; rack mount type, fully loaded</td>
<td>Nos.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>26</td>
<td>12 - Port LIU, 19&quot; rack mount type, fully loaded</td>
<td>Nos.</td>
<td>6</td>
<td>10</td>
<td>3</td>
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<tr>
<td>27</td>
<td>OFC Pig tails</td>
<td>Nos.</td>
<td>96</td>
<td>144</td>
<td>60</td>
<td>24</td>
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<tr>
<td>28</td>
<td>Cat - 6, 24 port fully loaded patch panel</td>
<td>Nos.</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>29</td>
<td>Cat - 6, 12 port fully loaded patch panel</td>
<td>Nos.</td>
<td>6</td>
<td>10</td>
<td>3</td>
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<tr>
<td>30</td>
<td>Power Cable (3 Core, armoured, 1.5 Sq. mm.), as per spec.</td>
<td>Mtrs</td>
<td>850</td>
<td>1000</td>
<td>500</td>
<td>400</td>
<td>150</td>
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<td>Item</td>
<td>Description</td>
<td>Mtrs</td>
<td>1700</td>
<td>1500</td>
<td>2000</td>
<td>400</td>
<td>1200</td>
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<tr>
<td>31</td>
<td>32mm HDPE Pipe</td>
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<tr>
<td>32</td>
<td>Flexible 32mm PVC pipe</td>
<td>Mtrs</td>
<td>300</td>
<td>200</td>
<td>50</td>
<td>50</td>
<td>50</td>
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<tr>
<td>33</td>
<td>GI Pipe 1&quot; Dia</td>
<td>Mtrs</td>
<td>0</td>
<td>100</td>
<td>200</td>
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<tr>
<td>34</td>
<td>GI Pipe 2&quot; Dia</td>
<td>Mtrs</td>
<td></td>
<td></td>
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<tr>
<td>35</td>
<td>Tubular Steel Poles as per IS:2713, SP410, length 7 mtr</td>
<td>nos</td>
<td>24</td>
<td>20</td>
<td>25</td>
<td>6</td>
<td>5</td>
<td>9</td>
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<tr>
<td>36</td>
<td>Earthing Materials</td>
<td>Set</td>
<td>2</td>
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<td>2</td>
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<td>1</td>
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<tr>
<td>37</td>
<td>Video Management Server</td>
<td>nos</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>38</td>
<td>Network attached storage for video management server (storage 8 TB in RAID-5 configuration with future expandable)</td>
<td>nos</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>39</td>
<td>Network attached storage for video management server (storage 24 TB in RAID-5 configuration with future expandable)</td>
<td>nos</td>
<td>1</td>
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<td>40</td>
<td>Network Video Management software</td>
<td>nos</td>
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<td>1</td>
<td>1</td>
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<tr>
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<td><strong>INSTALLATION ITEMS</strong></td>
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<tr>
<td>1</td>
<td>System Engineering, Integration of all equipments, commissioning, testing, trial run &amp; supply &amp; installation of any other items/accessories required for complete installation, integration &amp; commissioning or entire CCTV system.</td>
<td>LS</td>
<td>1</td>
<td>1</td>
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<tr>
<td>2</td>
<td>Supply &amp; fixing of 1&quot; size ( or more as required ) PVC Conduit/ casing capping and laying of CAT 6 /OFC cable through the conduit as required.</td>
<td>Mtrs</td>
<td>800</td>
<td>2000</td>
<td>400</td>
<td>300</td>
<td>500</td>
<td>200</td>
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<tr>
<td>3</td>
<td>Excavation of trenches, laying of HDPE/GI pipe, laying of OFC/Cat-6/ Power cable through HDPE pipe and backfilling</td>
<td>mtr</td>
<td>1200</td>
<td>170</td>
<td>0</td>
<td>1200</td>
<td>300</td>
<td>1200</td>
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<td></td>
<td>Description</td>
<td>Nos</td>
<td>Mtrs</td>
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<td>4</td>
<td>Fixing of one number HDPE pipe on wall surface and laying of CAT 6 cable/OFC cable/power cable as required</td>
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<tr>
<td>5</td>
<td>Excavation of trenches, laying of HDPE/ GI Pipe pipe, laying of OFC/Cat-6/ Power cable through HDPE/ GI pipe and backfilling the trenches, in cement concrete surface/ road, trench depth 0.30 meter, and making good the demolished surface by cement concrete as required.</td>
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<td>6</td>
<td>Earthing pit preparation, filling, connection, etc.</td>
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<td>7</td>
<td>Fixing &amp; Installation of 24 port LIU and other OFC accessories as required</td>
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<td>8</td>
<td>Fixing &amp; Installation of 12 port LIU and other OFC accessories as required</td>
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<tr>
<td>9</td>
<td>Installation/ Mounting of Racks with accessories</td>
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<tr>
<td>10</td>
<td>Erection of metallic pole of following length in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. (Above 6.5 metre and upto 8.0 metre) including mounting brackets as required.</td>
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<tr>
<td>11</td>
<td>Annual Maintenance Contract for five years</td>
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<tr>
<td>Sl.No.</td>
<td>Description</td>
<td>UOM</td>
<td>R/S LKP</td>
<td>R/S IBV</td>
<td>R/S ORI</td>
<td>R/S BG</td>
<td>CWS IBV</td>
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<tr>
<td>1</td>
<td>IP PTZ, High definition, Day/Night, Wide Dynamic Range, Dome Camera</td>
<td>Nos. 2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
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<tr>
<td></td>
<td>(including housing &amp; mountings, Complete as per specs.) for outdoor installation.</td>
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<td>2</td>
<td>2 Mega Pixel, High Definition IP Box/Bullet camera with Built-in IR, PoE &amp; 2 way Audio. (Including Housing &amp; mountings complete as per specs.) for outdoor and indoor installation.</td>
<td>Nos. 27</td>
<td>17</td>
<td>21</td>
<td>25</td>
<td>64</td>
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<tr>
<td>3</td>
<td>24 Port Layer-3 Switch as per specs.</td>
<td>NOS 1</td>
<td>1</td>
<td>1</td>
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<td>4</td>
<td>24 Port L2 Managed Switch as per specs.</td>
<td>Nos. 2</td>
<td>2</td>
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<tr>
<td>5</td>
<td>L2 Switch, 24 Ports (10/100/1000 BaseT) with PoE and 4 Nos.1G SFP uplink ports as per specs</td>
<td>Nos. 3</td>
<td>2</td>
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<tr>
<td>6</td>
<td>8-Port L2 Industrial Grade Switch with 8 10/100 Base T and 2 SFP as per specs</td>
<td></td>
<td>8</td>
<td>1</td>
<td>4</td>
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<tr>
<td>7</td>
<td>Compatible 1000 Base LX SFP Modules for above switches</td>
<td>Nos. 20</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>22</td>
<td></td>
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<tr>
<td>8</td>
<td>OFC Patch Cord, suitable for above switch/SFP module &amp; LIU</td>
<td>Nos. 20</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>22</td>
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<tr>
<td>9</td>
<td>Media Convertor with suitable fiber patch cords &amp; other accessories as required</td>
<td>Nos. 6</td>
<td>4</td>
<td>9</td>
<td>20</td>
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<tr>
<td>10</td>
<td>2 KVA Online UPS with MF Battery 2 hr Backup.</td>
<td>Nos. 0</td>
<td>0</td>
<td>0</td>
<td>2</td>
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<td>1 KVA Online UPS with MF Batteries for 2 hour backup.</td>
<td>Nos. 6</td>
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<td>500</td>
<td>400</td>
<td>2000</td>
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<td>Flexible 32mm PVC pipe</td>
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</tr>
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<td>1</td>
<td>System Engineering, Integration of all equipments, commissioning, testing, trial run &amp; supply &amp; installation of any other items/accessories required for complete installation, integration &amp; commissioning or entire CCTV system.</td>
<td>LS</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>2</td>
<td>Supply &amp; fixing of 1&quot; size ( or more as required ) PVC conduit/ casing capping and laying of CAT 6 /OFC cable through the conduit as required.</td>
<td>Mtrs</td>
<td>1100</td>
<td>250</td>
<td>650</td>
<td>310</td>
<td>1800</td>
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<td>Excavation of trenches, laying of HDPE/GI pipe, laying of OFC/Cat-6/ Power cable through HDPE pipe and backfilling the trenches , all kinds of soil, trench depth 1.05 mtr.</td>
<td>mtr</td>
<td>800</td>
<td>300</td>
<td>500</td>
<td>900</td>
<td>1000</td>
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<tr>
<td>4</td>
<td>Fixing of one number HDPE pipe on wall surface and laying of CAT 6 cable/OFC cable/power cable as required</td>
<td>Mtrs</td>
<td>150</td>
<td>50</td>
<td>0</td>
<td>100</td>
<td>100</td>
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<tr>
<td>5</td>
<td>Excavation of trenches, laying of HDPE/ GI Pipe pipe, laying of OFC/Cat-6/ Power cable through HDPE/ GI pipe and backfilling the trenches , in cement concrete surface/ road , trench depth 0.30 meter , and making good the demolished surface by cement concrete as required.</td>
<td>Mtrs.</td>
<td>50</td>
<td>0</td>
<td>400</td>
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<td>Earthing pit preparation,filling,connection, etc.</td>
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<td>3</td>
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<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>8</td>
<td>Fixing &amp; Installation of 12 port LIU and other OFC accessories as required</td>
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<td>2</td>
<td>2</td>
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<tr>
<td>9</td>
<td>Installation/ Mounting of Racks with accessories</td>
<td>nos</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>9</td>
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</table>
10 | Erection of metallic pole of following length in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. (Above 6.5 metre and upto 8.0 metre) including mounting brackets as required. | nos | 2 | 0 | 13 | 0 | 20 |

11 | Annual Maintenance Contract for five years after one year warranty period | Lot |

| Lot | AMC 1st Year | Lot | 1 | 1 | 1 | 1 | 1 |
| Lot | AMC 2nd Year | Lot | 1 | 1 | 1 | 1 | 1 |
| Lot | AMC 3rd Year | Lot | 1 | 1 | 1 | 1 | 1 |
| Lot | AMC 4th Year | Lot | 1 | 1 | 1 | 1 | 1 |
| Lot | AMC 5th Year | Lot | 1 | 1 | 1 | 1 | 1 |

### BILL OF QUANTITY (TOTAL)

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<th>Sl.No.</th>
<th>Description</th>
<th>UOM</th>
<th>TOTAL QTY</th>
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<td>1</td>
<td>IP PTZ , High definition, Day/Night, Wide Dynamic Range, Dome Camera (including housing &amp; mountings Complete as per specs.) for outdoor installation.</td>
<td>Nos.</td>
<td>21</td>
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<td>2</td>
<td>2 Mega Pixel, High Definition IP Box/Bullet camera with Built-in IR, PoE &amp; 2 way Audio. (Including Housing &amp; mountings complete as per specs.) for outdoor and indoor installation.</td>
<td>Nos.</td>
<td>355</td>
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<tr>
<td>3</td>
<td>24 Port Layer-3 Switch as per specs.</td>
<td>NOS</td>
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<td>24 port L2 Managed Switch as per specs</td>
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<td>L2 Switch, 24 Ports (10/100/1000 BaseT) with PoE and 4 Nos.1G SFP uplink ports as per specs</td>
<td>Nos.</td>
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<td>8-Port L2 Industrial Grade Switch with 8 10/100 Base T and 2 SFP as per specs</td>
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<td>Compatible 1000 Base LX SFP Modules for above switches</td>
<td>Nos.</td>
<td>144</td>
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<td>8</td>
<td>OFC Patch Cord suitable for above switch/SFP module &amp; LIU</td>
<td>nos</td>
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<td>9</td>
<td>Media Convertor with suitable fiber patch cords &amp; other accessories as required</td>
<td>Nos.</td>
<td>119</td>
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<td>2 KVA Online UPS with MF Battery 2 hr Backup.</td>
<td>nos.</td>
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<td>1 KVA Online UPS with MF Batteries for 2 hour backup.</td>
<td>Nos.</td>
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<td>3 KVA Online UPS with SMF Battery 2 hr Backup.</td>
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<td>Work station for surveillance monitoring</td>
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<td>Nos. 8</td>
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<td>15</td>
<td>Minm. 40 inch Flat LED display with wall mount brackets as per specs.</td>
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<td>External Microphone with suitable cable &amp; accessories as required</td>
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<td>17</td>
<td>External Speaker with suitable cable &amp; accessories as required</td>
<td>Nos. 25</td>
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<td>Audio Alarm with suitable cable &amp; accessories as required</td>
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<td>12 core outdoor armoured 9/125 Singlemode optical fiber cable</td>
<td>mtrs 6400</td>
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<td>6 Core outdoor armoured 9/125 Single mode Optical Fiber Cable</td>
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<td>Box 37</td>
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<td>22</td>
<td>Cat 6 STP Cable boxes (305 Mtrs.)</td>
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<td>27 U floor mount Rack with accessories as per specs.</td>
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<td>24</td>
<td>12 U wall mount rack with accessories as per specs.</td>
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<td>25</td>
<td>24 - Port LIU, 19” rack mount type, fully loaded</td>
<td>Nos. 11</td>
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<td>12 - Port LIU, 19” rack mount type, fully loaded</td>
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<td>OFC Pig tails</td>
<td>Nos. 804</td>
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<td>Cat - 6, 24 port fully loaded patch panel</td>
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<td>Cat - 6, 12 port fully loaded patch panel</td>
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<td>Power Cable (3 Core, armoured, 1.5 Sq. mm.), as per spec.</td>
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<td>32mm HDPE Pipe</td>
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<td>Flexible 32mm PVC pipe</td>
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<td>GI Pipe 1” Dia</td>
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<td>GI Pipe 2” Dia</td>
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<td>Tubular Steel Poles as per IS:2713, SP410, length 7 mtr</td>
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<td>Earthing Materials</td>
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<td>Network attached storage for video management server (storage 8 TB in RAID -5 configuration with future expandable)</td>
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<td>Network attached storage for video management server ( storage 24 TB in RAID -5 configuration with future expandable)</td>
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**INSTALLATION ITEMS**

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<th>Description</th>
<th>Quantity</th>
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<tbody>
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<td>1</td>
<td>System Engineering, Integration of all equipments, commissioning, testing, trial run &amp; supply &amp; installation of any other items/accessories required for complete installation, integration &amp; commissioning or entire CCTV system.</td>
<td>LS</td>
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<td>Supply &amp; fixing of 1&quot; size ( or more as required ) PVC conduit/ casing capping and laying of CAT 6 /OFC cable through the conduit as required.</td>
<td>Mtrs</td>
<td>8310</td>
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<td>3</td>
<td>Excavation of trenches, laying of HDPE/GI pipe, laying of OFC/Cat-6/ Power cable through HDPE pipe and backfilling the trenches, all kinds of soil, trench depth 1.05 mtr.</td>
<td>mtr</td>
<td>9100</td>
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<td>Fixing of one number HDPE pipe on wall surface and laying of CAT 6 cable/OFC cable/power cable as required</td>
<td>Mtrs</td>
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<td>Excavation of trenches, laying of HDPE/ GI Pipe pipe, laying of OFC/Cat-6/ Power cable through HDPE/ GI pipe and backfilling the trenches, in cement concrete surface/ road, trench depth 0.30 meter, and making good the demolished surface by cement concrete as required.</td>
<td>Mtrs</td>
<td>2680</td>
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<td>Earthing pit preparation, filling, connection, etc.</td>
<td>Nos.</td>
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<tr>
<td>7</td>
<td>Fixing &amp; Installation of 24 port LIU and other OFC accessories as required</td>
<td>nos.</td>
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<td>8</td>
<td>Fixing &amp; Installation of 12 port LIU and other OFC accessories as required</td>
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<td>Installation/ Mounting of Racks with accessories</td>
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<td>56</td>
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<td>10</td>
<td>Erection of metallic pole of following length in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. (Above 6.5 metre and upto 8.0 metre) including mounting brackets as required.</td>
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