



भारतीय राष्ट्रीय उपभोक्ता सहकारी संघ मर्यादित
National Cooperative Consumers' Federation of India Ltd
(Under Ministry of Consumer Affairs, Food Public Distribution)

201, Poonam Plaza, 694/2B, Market Yard Road, Pune - 411037
Phone: 020-24275787, Mob - 7065085780 E- mail id: nccfpune@gmail.com



NCCF/PUNE/BUSS/2023-24/79-A

Date – 04.01.24

SHORT TENDER NOTICE

Pune Branch of NCCF invites Tenders from Empanelled Business Associates of NCCF for following work.

1 - Name of Work - Providing, fixing, installation, commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backup and smart intelligent interface connectivity etc. complete at Bhira Pick up wear & Rawalje Dam. Dam. etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project.

2- Estimated Cost of work – Rs. 67,21,586/-

3- Cost of Tender Documents – Rs. 2000 /- + Rs.360 /- GST (Not refundable).

4-Earnest Money Deposit (EMD) by online payment or through DD (No interest will be paid) – Rs.67,300 & Security Money - Rs.1,38,600/-

5-Date and Time of start of Tender Submission –27/12/2023

6-Last Date and Time of Tender Submission –09.01.2024 at 05.30 PM.

7-Date and Time of Tender Opening – 09.01.2024 at 06.00 PM.

8-Place of Tender Opening- Office of Branch Manager Pune, NCCF

9-Account Details for Depositing EMD

Name of Account Holder- NATIONAL CO-OP CONSUMERS FED

Account Number- 16840200000608

Name of Bank and branch- UCO Bank MUKUND NAGAR-PUNE.

IFSC Code - UCBA0001684



भारतीय राष्ट्रीय उपभोक्ता सहकारी संघ मर्यादित
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201, Poonam Plaza, 694/2B, Market Yard Road, Pune - 411037
Phone: 020-24275787, Mob - 7065085780 E- mail id: nccfpune@gmail.com

Terms and Conditions:

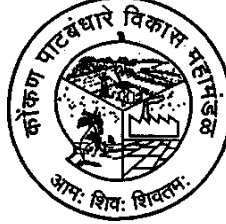
- 1-For all works having estimated cost of work more than Rs 5.0 Lakh value, Bidders must have an Experience of successful completion of similar nature of work of minimum 25 % of the Tender value in last 5 years. Completion certificate of Competent Authority of Concerned Department shall be enclosed.
- 2- Selection of the bidder will be made on the basis of maximum margin offered for NCCF and lowest rate quoted.
- 3- NCCF Shall be at liberty to distribute 40 % of the total tendered quantity of materials amongst other than L1 bidders subject to acceptance of L1 rates by other than L1 bidders and fulfillment of eligibility criteria by them.
- 4- NCCF shall terminate the empanelment of a Business Associate if they have competed against NCCF in any bid either individually, as a partner or in a Joint Venture.
- 5-All successful bidders will have to deposit a Security Deposit (SD) of 2 % (Nil for empaneled suppliers of NCCF for works up to Rs 10.0 Lakhs) of awarded value. EMD of successful bidders can be included as SD whereas in case of unsuccessful bidders, it will be refunded. No interest will be paid on SD money.
- 6-NCCF shall be at liberty to postpone/ cancel the tender and accept or reject any bid.
- 7- Terms and conditions would remain same as mentioned in the tender schedule enclosed herewith.

DATED – 01.01.24.

Sd/-
BRANCH MANAGER
National Cooperative Consumers' Federation of India Ltd

Tender D:

E-Tender Notice No.

GOVERNMENT OF MAHARASHTRA

**WATER RESOURCES DEPARTMENT
KOKAN REGION, MUMBAI
THANE IRRIGATION CIRCLE, THANE
RAIGAD IRRIGATION DIVISION, KOLAD**

e-Tender Paper<https://mahatenders.gov.in>**B-1 AGREEMENT**

Providing, fixing, installation, commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative

NAME OF WORK: - power backup and smart intelligent interface connectivity etc. complete at Bhira Pick up wear & Rawalje Dam. Dam. etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project.

AMOUNT PUT TO TENDER: **Rs. 67,21,586/-**

EXECUTIVE ENGINEER
RAIGAD IRRIGATION DIVISION
KOLAD - RAIGAD

Contractor

No. of Corrections

SDE
BHEP RawaljeExecutive Engineer
RID Kolad

**GOVERNMENT OF MAHARASHTRA
WATER RESOURCES DEPARTMENT**

Name of Work: Providing, fixing, installation & commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backup & smart intelligent interface connectivity etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project

CERTIFICATE

“Certified that I have scrutinized the tender document thoroughly and I have gone through each and every page of Tender Document and satisfied with the same. There is no blank space, omission or any discrepancies left in the Tender Document”

Tender Amount: - Rs. **67,21,586/-**

Sub-Divisional Engineer
Bhira HEP Sub Division
Rawalje.

Divisional Accounts Officer,
Raigad Irrigation Division
Kolad - Raigad

EXECUTIVE ENGINEER
RAIGAD IRRIGATION DIVISION
KOLAD – RAIGAD

Contractor



No. of Corrections

SDE
BHEP Rawalje

Executive Engineer
RID Kolad

NAME OF WORK : Providing, fixing, installation & commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backou & smart intelligent interface connectivity etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project.

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Contractor

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BHEP Rawalje

Executive Engineer
RID Kolad



DISCLAIMER

1. Detailed Time Table for the various activities to be performed in e-tendering process by the Tenderer for quoting their offer is given in this Tender Document under "**Tender Schedule**", Contractor should carefully note down the cut-off" dates for the carrying out each e-tendering process / activity.
2. Every effort is being made to keep the Website uptodate and running smoothly 24x7 by the Government and the Service Provider. However Government takes no responsibility, and will not be liable for, the website being temporarily unavailable due to any technical issue at any point of time.
3. In that event Water Resources Department will not be liable or responsible for any damages or expenses arising from any difficulty, error, imperfection or inaccuracy with this Website, it includes all associated services, or due to such unavailability of the Website or any part thereof or any contents or any associated services.
4. Tenderers must follow the timetable of e-tendering process and get their activities of e-tendering processes done **well in advance** so as to avoid any inconvenience due to unforeseen technical problem if any.
5. Water Resources Department will not be responsible for any incomplete activity of e-tendering process of the tenderer due to technical error/failure of website and it cannot be challenged by way of appeal, arbitration and in the Court of Law. **Contractors must get done all the e-tendering activities well in advance.**

Contractor



No. of Corrections

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BHEP Rawalje

Executive Engineer
RID Kolad

GOVERNEMENT OF MAHARASHTRA

WATER RESOURCES DEPARTMENT

ORIGINAL AGREEMENT ; B-1/-----
NO.

NAME OF WORK ; Providing, fixing, installation & commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backou & smart intelligent interface connectivity etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project.

Name of Contractor ; -----

Date of Receipt of Tender ; -----

No.& Date of Work Order ; -----

Amount Put to Tender ; **Rs. 67,21,586/-**

Percentage Quoted ; -----

Amount of Contract ; -----

Date of Commencement ; -----

Time stipulated for completion of work ; -----

Date of Completion as per Agreement ; 12 (Twelve) Calendar Months from the date of written order to start work, which will include the monsoon period

Actual Date of Completion ; -----

Reference to sanction of tender ; -----

Extension of time limit ; 1) -----
; 2) -----
; 3) -----

Certified that this Agreement Contains ; **Pages No. to**

Contractor

No. of Corrections

SDE
BHEP RawaljeExecutive Engineer
RID Kolad


महाराष्ट्र शासन जलसंपदा विभाग

कोंकण पाटबंधारे विकास महामंडळ, ठाणे

रायगड पाटबंधारे विभाग, कोलाड, ता.रोहा, जि.रायगड

web -kidc.maharashtra.etenders.in & email-eerid24@gmail.com

ई-निविदा सूचना क्र.८ सन २०२३-२४

महाराष्ट्र राज्याच्या राज्यपालांच्या वतीन कार्यकारी अभियंता, रायगड पाटबंधारे विभाग, कोलाड, ता.रोहा, जि.रायगड पिन नं.४०२३०४ हे सक्षम निविदाकारांकडून खालील कामाकरीता ई-निविदा प्रणालीद्वारे (ऑनलाईन) निविदा मागवित आहेत. निविदा कागदपत्रे शासनाच्या संकेतस्थळ <https://mahatenders.gov.in> येथुन डाऊनलोड करण्यात यावीत. सविस्तर ई-निविदा सूचना व ई-निविदेबाबत सर्व माहिती शासनाच्या संकेतस्थळावर व विभागीय कार्यालयाच्या सूचना फलकावर उपलब्ध आहे.

निविदा स्वीकारण्याचा अथवा नाकारण्याचा अधिकार कार्यकारी अभियंता, रायगड पाटबंधारे विभाग, कोलाड, ता.रोहा, जि.रायगड पिन नं.४०२३०४ यांनी राखून ठेवला आहे. अट असलेली निविदा स्वीकारली जाणार नाही. सदर निविदा सूचनेमध्ये काही बदल होत असल्यास <https://mahatenders.gov.in> या संकेतस्थळावर कळविण्यात येईल.

अ. क्र.	कामाचे नाव	निविदेची किंमत रु. (G.S.T. वगळून)	इसारा रक्कम रु.	काम पूर्ण करणेचा कालावधी	ई-निविदा संचाची किंमत रु.	कंत्राटदाराचा नोंदणी वर्ग
१.	भिरा जलविद्युत प्रकल्पाच्या उन्नेई धरणावर व उभेई धरणावर येथे सुरक्षेच्या दृष्टीने धरणस्थळी सानुकूलित उपायांसह IoT आधारित डेटा ट्रान्समिशन सिस्टम पर्यायी पॉवर बँकअप आणि स्मार्ट इंटेलिजेंट इंटरफेस कनेक्टिव्हिटी व स्मार्ट इंटेलिजेंट रीकॉनिसन्स सिस्टमसह पुरवणे, बसवणे, कार्यान्वित करणे	६७,२१,५८६/- (GST वगळून)	६७,३००/-	१२ महिने	रु.२०००/- + रु.३६०/- रु.२३६०/- जी.एस.टी. सहित (ना-परतावा)	अशा प्रकारच्या कामातील सक्षम अनुभवी व नोंदणीकृत कंत्राटदार

ई-निविदेचे वेळापत्रक

निविदा उपलब्ध कालावधी दि.२७/१२/२०२३ ते दि.१०/०१/२०२४

Geo-tagging कालावधी दि.०४/०१/२०२४ ते दि.१०/०१/२०२४

ई-निविदा उघडण्याचा दि.१२/०१/२०२४

Contractor

No. of Corrections

SDE
BHEP Rawalje

Executive Engineer
RID Kolad



खालील संकेतांक स्थळावर ई-निविदा बाबत सर्व माहिती उपलब्ध आहे.

१. संकेतस्थळ <https://www.mahatenders.gov.in>
२. कार्यकारी अभियंता, रायगड पाटबंधारे विभाग, कोलाड, ता.रोहा, जि.रायगड या कार्यालयातील सूचना फलक.
३. जलसंपदा विभागाचा दि.१८/१०/२०२३ रोजीच्या सुधारीत शासन निर्णयान्वये कार्यवाही करणेत यावी.
४. पत्रव्यवहारासाठी संपर्क व्यक्ती व पत्ता:- कार्यकारी अभियंता, रायगड पाटबंधारे विभाग, कोलाड, ता.रोहा, जि.रायगड पिन नं.४०२३०४ ई-मेल eerid२४@gmail.com
५. निविदा सादर करण्यासाठी निविदाकार यांनी केलेल्याआर्थिक खर्चास जबाबदार न राहता कोणतीही एक किंवा सर्व निविदा फेटाळण्याचा किंवा संपुर्ण निविदा प्रक्रिया रद्द करण्याचे अधिकार सक्षम प्राधिकार्याने राखुन ठेवलेले आहेत.
६. Geo-Tagging ची प्रक्रिया सुरळीत पार पाडणेकरीता निविदा संचामध्ये नमूद करण्यात आलेल्या कार्यक्षेत्रावरील अक्षांश व रेखांश स्थळी कंत्राटदाराने स्वतः किंवा त्यांच्या प्राधिकृत प्रतिनिधी यांनी कार्यक्षेत्रावर प्रत्यक्ष भेट देणे आवश्यक आहे. (निविदा संचामध्ये Geo-Tagging प्रमाणपत्राचा नमूद देण्यात आलेला असून, सदरचे प्रमाणपत्र हे कंत्राटदाराने निविदेचा लिफाफा क्र.१ मधून सादर करणे अनिवार्य आहे अन्यथा कंत्राटदाराचा लिफाफा क्र.२ उघडण्यात येणार नाही व सदर कंत्राटदाराची निविदा ग्राह्य राहणार नाही, याची नोंद घ्यावी.
७. निविदा प्रक्रियेमध्ये पश्चात अर्हता निकष ठेवण्यात आलेले आहेत.
८. ई-निविदा प्रक्रियेसाठी कोणत्याही परिस्थितीत निविदाकाराकडून निविदा छापील प्रतच्या (Hard Copy) स्वरूपात स्वीकारली जाणार नाही.

टिप:- निविदा भरतांना आपले दर G.S.T. वगळून भरणे बंधनकारक आहे. G.S.T. चे दर संबंधीत विभागाचे नियमाप्रमाणे लागू राहतील.

कार्यकारी अभियंता,
रायगड पाटबंधारे विभाग,
कोलाड

Contractor

No. of Corrections

SDE
BHEP Rawalje

Executive Engineer
RID Kolad



E-Tender Notice No.8 For 2023-24
GOVERNMENT OF MAHARASHTRA
WATER RESOURCES DEPARTMENT
Konkan Irrigation Development Corporation, Thane
Thane Irrigation Circle, Thane
Raigad Irrigation Division, Kolad, Tal.Roha, Dist.Raigad
Main Portal:- <https://mahatenders.gov.in>

Online electronic bids in 'B-1' Form for below mentioned work is invited by the **Executive Engineer, Raigad Irrigation Division, Kolad** from eligible and capable Contractors Tender documents will be available on the website <https://mahatender.gov.in>. Main Tender Documents are available for online bid preparation and submission on website from below. Right to reject any or all tenders is reserved by the **Executive Engineer, Raigad Irrigation Division, Kolad**. Any conditional tender will be summarily rejected.

Sr. No.	Name of work	Estimated Cost (Rupees)	Earnest Money (Rupees)	Security Deposit (Rupees)	Time limit in Tender (Calendar Months)
1	Providing, fixing, installation & commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backou & smart intelligent interface connectivity etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project.	Rs.67,21,586/-	Rs.67,300	Rs.1,38,600/-	12 (Twelve) Calendar Months (including monsoon)

-Tender Timetable-

Sr. No	Stage	Start		Expiry	
		Date	Time	Date	Time
1.	Tender Sale & Download	27/12/2023	10.00	10/01/2024	18.00
2.	Bid Submission	10/01/2024	18.00	--	--
3.	Opening of Bid (if possible)	12/01/2024	11.00	--	--

The Information regarding Online electronic bds are below :

<https://mahatenders.gov.in>

(If any change in the tender notice will be intimated on the above website)

1. Copy of notice board in the office of the Executive Engineer, Raigad Irrigation Division, Kolad.
2. GR dated 30/11/2018 of WRD and its correction dated 12/12/2018, 13/09/2019, 23/06/2020, Dt.08/07/2021 will be follow fully.

Contractor

No. of Corrections

**SDE
BHEP Rawalje**

**Executive Engineer
RID Kolad**



3. कोंकण पाटबंधारे विकास महामंडळ, ठाणे यांचे परिपत्रक क्र.कोपावि/तां.४/निविदा/२८३०, दि.१७/१०/२००१ नुसार "No individual contractor, or a joint ventrure firm, or any of the joint venture partner(s) of the same joint venture as a separate entity; shall be considered eligible for tendering/getting prequalified for this work; in case two Dam head works or in all three works are in execution with the firm or joint venture or partner(s) of the joint venture"
4. Contract Details :-Office of the Executive Engineer, Raigad Irrigation Division, Kolad, Tal.Roha, Dist.Raigad Pin No.402304. Email ID:- eerid24@gmail.com Phone No.02194/250857.
5. The department is not liable for any expenditure incurred by the bidder to participate in the tender process. Right to reject nay or all the bids/tender is reserved by tender accepting authority
6. Performance security D.D. / B.G. for all works of this tender notice shall be submitted in accordance with clause 1 (B) of the tender documents.

GEO-TAGGING

MANNER OF GEO-TAGGING (As per शासन शुध्दीपत्रक क्र. निविदा ०४१७/प्र. क्र. २४७/मोप्र- १, दि. ०५ जुलै २०२२)

1. It shall be binding for all contractors to inspect the work site area and other important site location before filling the tender.
2. Contractor or his authorized representative should carry out Geo-tagging of three site location site during the period of 5 working days as given in tender notice before Bid submission close Date. Geo-tagging should be done through GPS MAP CAMERA Application available on PLAY STORE in Android/Apple Mobile.
3. The officer calling for tender have fixed site location for Geo-Tagging for effective site visit as below -
 1. Location 1 Lat- 18°27'38.5"N Long- 73°23'09.9"E
 2. Location 2 Lat- 18°26'38.2"N Long- 73°21'02.8"E
 3. Location 3 Lat- 18°27'39.5"N Long- 73°23'08.1"E
4. The contractor himself or his authorized representative shall carry out Geo-Tagging at site locations during the period from Dt.04/01/2024 to Dt.10/01/2024 and has to submit certificate in form-4 "along with photos of Geo-Tagging at three location as above along with tender in envelope No.1, without which the tender will not considered. The certificate of Geo-Tagging shall be self attested with date and time of the site visit.

(Only Online submission will be accepted)

Contractor

No. of Corrections

SDE
BHEP Rawalje

Executive Engineer
RID Kolad



5. The proforma of certificate of Geo-Tagging Form is enclosed in the tender on page No.45 as Annexure 6. The contractor shall submit Geo-Tagging in Envelope No.1 of the tender without which the tender will not be considered.

(Only Online submission will be accepted).

**Executive Engineer,
Raigad Irrigation Division,
Kolad**

Contractor



No. of Corrections

**SDE
BHEP Rawalje**

**Executive Engineer
RID Kolad**

DETAILS OF WORK

NAME OF WORK	:	Providing, fixing, installation & commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backou & smart intelligent interface connectivity etc. complete at Bhira Hydro Electric Project under Pickup wear & Rawalaje Dam.
Estimated cost of work	:	Rs. 67,21,586/-
Earnest Money	:	Rs. 67,300
The EMD applicable amount shall be paid via Online mode only.		
Total SecurityDeposit	:	2% (Two Percent)
(i) Initial Security Deposit	:	Rs. 67,300
(ii) and Further Security Deposit to be deducted from bills	:	Rs. 67,300
Total SecurityDeposit	:	Rs. 1,34,600/-
Validity Period	:	60 days from the date of opening
Time limit for completion of work	:	12 (Twelve) months (including monsoon)

Pre-Bid Conference

TENDER SCHEDULE

Cost of Blank Tender Form	:	Rs 2000/- + GST
Download period of online Tender	:	As per Tender Schedule
Last date and time for online bid preparation and submission by the contractor (Technical and Financial).	:	As per Tender Schedule
Online Raised any Technical Point	:	
Last date and time. (Seek Clarification)	:	
Period of online bid data decryption and re-encryption for tender details by the Contractor.	:	As per Tender Schedule
Place, Date and timing of Opening of Technical and Financial Bid	:	As per Tender Schedule
Receipt of online EMD with its clear and legible photocopy stamp paper of Rs. 500/- bond Affidavit (Original) in prescribed format given in Annexure I sworn before Executive Magistrate/Notary and Tender Document fees and EMD to be paid online only via Payment Gateway mode/ TDR of Additional performance Security Deposit (If required)	:	Document Tender Fee and EMD to be paid via online mode only. Receipt of the same clear and legible photocopy to be attached in Envelope No.1 If it is not possible to open it on the date specified above, the Bid opening authority shall communicate the change in opening date which shall not be less than three working days after the date of communication (Excluding date of communication) on E-tendering web- site.

TO BE FILLED IN BY THE CONTRACTOR

I/We have quoted my/our offer in percentage rate in words as well as in figures. I/We further undertake to enter into contract in regular "B-1" form in Public Works Department
Name and signature of Contractor / Power of Attorney holder with complete address

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TENDERING PROCEDURE: -**1.1. Blank Tender Forms.**

- 1.1.1 Tender Forms can be downloaded from the e-Tendering portal of NIC, Government of Maharashtra i.e. <https://mahatenders.gov.in> **Tender Document Fee and EMD** to be paid **Via SBI MOPS Online Payment Gateway Mode Only**. And upload successful payment receipt in **ENVELOPE NO.1 TECHNICAL BID** Documents.
- 1.1.2 The tender submitted by the tenderer shall be based on the clarification, additional facility offered (if any) by the Department and this tender shall be unconditional. Conditional tenders will be summarily REJECTED.
- 1.1.3 All tenderers are cautioned that tenders containing any deviation from the contractual terms and conditions, specifications or other requirements and conditional tenders will be treated as nonresponsive. The contractor should clearly mention in forwarding letter that his offer (in EnvelopeNo.1&2) does not contain any condition, deviations from terms and conditions stipulated in the tender.
- 1.1.4 Tenderers should have valid **ClassII/III Digital Signature Certificate (DSC)** obtained from any Certifying Authorities.
- 1.1.5 For any assistance on the use of Electronic Tendering System, the Users may call the below
Ph. No.**0120-4200462, 4001002, 91-8826246593**
- 1.2 Special Instructions to the Contractors / Bidders for the e-submission of the bids online through this tender site: <https://mahatenders.gov.in> and **hard copy of documents will not be accepted.**
- 1.2.1 Bidder must register themselves on <https://mahatenders.gov.in> portal by clicking "Online Bidder Enrollment" and then map Digital Signature certificate.
- 1.2.2 Bidder then login to the site giving **User id / Password** chosen during registration.
- 1.2.3 The DSC e-token that is registered should be used by the bidder and should not be misused by others.
- 1.2.4 The Bidders can update well in advance, the documents such as certificates, purchase order details etc., under **My Documents** option and these can be selected as per tender requirements and then attached along with bid documents during bid submission.
- 1.2.5 After downloading/getting the tender schedules, the Bidder should go through them carefully and then submit the documents as asked, otherwise, the bid will be rejected.

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- 1.2.6 If there are any clarifications, this may be obtained online through the tender site, or through the contact details. Bidder should take into account of the corrigendum published before submitting the bids online.
- 1.2.7 Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender schedule and they should be in **PDF/XLS/RAR** formats. If there is more than one document, they can be clubbed together.
- 1.2.8 Document **Tender Fee** and **EMD** to be paid via SBIMOPS Online Payment Gateway Mode through RTGS/NEFT from bidder's own bank account only. and upload successful payment receipt in **ENVELOPE NO.1 TECHNICAL BID** Documents.
- 1.2.9 The bidder reads the terms & conditions and accepts the same to proceed further to submit the bids.
- 1.2.10 The bidder has to submit the tender document online well in advance before the prescribed time to avoid any delay or problem during the submission process.
- 1.2.11 After the bid submission, the acknowledgement number, given by the e-tendering system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender.
- 1.2.12 Document **Tender Fee** and **EMD** to be paid via SBIMOPS Online Payment Gateway Mode only. And upload successful payment receipt in **ENVELOPE NO.1 TECHNICAL BID** Documents. And **BOQ** in **.xls** format file to **Uploaded in ENVELOPE NO.2 FINANCIAL BID Documents.**
- 1.2.13 The **Tender Inviting Authority (TIA)** will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders.
- 1.2.14 The bidder may submit the bid documents either by online mode through the site (<https://mahatenders.gov.in>) as indicated in the tender.
- 1.3 The tendering system will give a successful bid updating message after uploading all the bid documents submitted & then a bid summary will be shown with the bid no, date & time of submission of the bid with all other relevant details. The documents submitted by the bidders will be digitally signed using the DSC e-token of the bidder and then submitted.
- 1.3.1 The bid summary has to be printed and kept as an acknowledgement as a token of the submission of the bid. The bid summary will act as a proof of bid submission for a tender floated and will also act as an entry point to participate in the bid opening date.
- 1.3.2 Bidder should log into the site well in advance for bid submission so that he submits the bid in time i.e. on or before the bid submission end time. If there is any delay, due to other issues, only bidder is responsible.

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- 1.3.3 The bidder should see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is liable to be rejected.
- 1.3.4 The time settings fixed in the server site & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
- 1.3.5 All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission & not be viewable by anyone until the time of bid opening. Overall, the submitted tender documents become readable only after the tender opening by the authorized individual.
- 1.3.6 The confidentiality of the bids is maintained since the secured SocketLayer128bit encryption technology is used. Data storage encryption of sensitive fields is done.
- 1.3.7 The bidders are requested to submit the bids through online e-Tendering System to the TIA well before the bid submission end date & time **(as per Server System Clock)**.
- 1.3.8 The bidder should logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the **(X)** option in the browser.
- 1.3.9 The bidder should upload the **Technical Bid** in **.rar** format single file to upload in Technical cover and then **BOQ** in **.xls** format single file to **Uploaded in Envelope Financial Bid Documents**.
- 1.3.10 **All the following documents from Sr.No.1.4.1 to 1.4.13 shall be given by contractor in Envelope No.1 correctly and completely otherwise his Envelope No.2 will not be opened. Even though the Bidders meet the above qualifying criteria, they are subject to be disqualified if they have made. Misleading or false representations in the Statements, attachments submitted in proof of the qualification requirements.**

And / or

Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.

1.4 ENVELOPE No. 1: (TECHNICAL BID)

The bidder must purchase the bidding documents via online mode by filling the cost of Tender.

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The first envelope “Envelope No.1” shall contain the following documents.

- 1.4.1 Tender Fee and EMD to be paid Via SBIMOPS Online Payment Gateway Mode Only. And upload successful payment receipt in Envelope No.1 Technical Bid Documents.
- 1.4.2 Earnest money of the value of **Rs.67,300 (Rupees Sixty Seven Thousand Three Hundred only)** to be paid via online mode only.
- 1.4.3 Scanned copy of P.T.E. & P.T.R. Certificate.
- 1.4.4 Scanned copy of GST Registration Certificate.
- 1.4.5 Scanned copy of Declaration of the Contractor in the prescribed format.
- 1.4.6 Scanned copy of Partnership Deed and Power of Attorney, in case of a firm tendering for work.
- 1.4.7 Scanned copy of Affidavit in respect of genuineness of documents contained in the Envelope No.1 in the prescribed proforma provided with Tender Set on Rs.500/- stamp. (Proforma of Affidavit is attached with Tender.) This affidavit is also to be submitted physically as per schedule given in tender in original and will be the part and parcel of contract agreement (Information to be given in Proforma on Page No.)
- 1.4.8 Since it is the special work in the field of digital electronics which is related to dam safety, bidder must upload Scanned copies of minimum Ten work done certificates duly signed by not less than Executive Engineer rank officer, WRD Govt. of Maharashtra indicating satisfactory installation of similar type of works (IoT/Transmission control-based data transmission/smart intelligent reconnaissance/Security monitoring & supervision or remote surveillance systems) at remote dam sites in Envelope No.1. The specified items must be OEM (Original equipment manufacturer's) & must upload MAF (Manufacture's Authorization form) of the specified OEM along with specified certifications.
- 1.4.9 Statement No. I, part-I - Showing details of works in hand along with the value of unfinished work. If statement is signed by the contractor himself then, the information in this statement should be duly supported with certificates signed by the head of the Office under whom the works are

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completed. References of the supporting certificates must be given in remark column. The performance of contractor should be satisfactory.

1.4.10 (Statement No. I, part II) showing works tendered for and to be awarded/ on the last date of submission of the tender. Signed by the contractor

1.4.11 Undertaking 1, 2 & 3

1.4.12 Details of work of similar type of min. ten works carried out by the contractor duly supported with certificates signed by the head of the Office Ex. Engr. under whom the works were completed. The applicants Tender Submission Letter shall be typed on his Letterhead along with the assurance of supply of all items of schedule B as per specifications mentioned in schedule C and scanned copy of the same shall be uploaded along with Main tender document. Without these the tender will not be considered For Further Evaluation.

1.4.13 Scanned copy of Net Banking, NEFT/ RTGS should be submitted for the fee of tender & EMD through bidder bank account only, along with their bank statement showing the payment by contractor through their own bank A/C only.

If there is a lock down situation due to Covid 19 Pandemic disease or any other reason during Geo-tagging period / site inspection period, the bidder or his authorized representative shall have obey all the protocols and should travel with necessary travel pass on his own responsibility and with due care by following the prevalent Govt. Rules and regulations in force imposed by the appropriate authority.

The original copies of all documents required & submitted in envelope No.1 shall be kept ready for verification at the time of opening of tender, if required,

Important Note:-It has been observed that while uploading documents for tender, bidders tend to upload unnecessary, irrelevant and sometimes multiple copies of the same documents. That leads to unnecessary burden on time & resources of the department. So it is to be informed that the documents relevant to this tender only shall be uploaded and bidders are advised to adhere to checklist of documents. Non compliance with this condition may lead to outright rejection of the said bidder from the tendering process

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1.4.14 As per G.R. 08/04/2021 The contractor shall submitted Geo-Tagging in envelop No. 1 of the tender. Without Geo-Tagging the tender will not be considered For Further Evaluation.

1.5 ENVELOPE NO.2: (FINANCIAL BID)

The second envelope clearly marked as **“Envelope No. 2”** shall **contain only the main tender**. The Tenderer should quote his offer **only through online bidding process** in terms of percentage of estimated rates. He should not quote his offer any where directly or indirectly in Envelope No.1.The contractor shall quote for the work as per details given in the main tender and also based on the detailed set of conditions issued/Additional stipulations made by the Department as informed to him by a letter from ChiefEngineer/Superintending Engineer after Clarifications. His tender shall be unconditional.

1.6 SUBMISSION OF TENDER:

Refer to Section **“Guidelines to Bidders on the operations of Electronic Tendering System of Water Resources Department”** for details.

1.7 OPENING OF TENDERS:

On the date, specified in the Tender Schedule, following procedure will be adopted for opening of the Tender.

(A) ENVELOPE NO.1: (TECHNICAL BID)

First of all, Envelope No.1 of the tender will be opened online to verify its contents as per requirements. If the various documents contained in this envelope do not meet the requirements of the Department, a note will be recorded accordingly by the tender opening authority and the said tenderer’s Envelope No.2 will not be considered for further action and the same will be recorded. The decision of the tender opening authority in this regard will be final and binding on the contractors.

(B) ENVELOPE NO.2: (FINANCIAL BID)

This envelope shall be opened online after opening of Envelope No.1, only if contents of Envelope No.1 are found to be acceptable to the Department. The tendered rates in Schedule ‘B’ **(As per BOQ)** or percentage **above/below** the estimated rates shall then be read out in the presence of bidders who remain present at the time of opening of Envelope No.2.

1.8 EARNEST MONEY :

- (i) Earnest money of minimum **Rs.67,300 (Rupees Sixty Seven Thousand Three Hundred only)** shall be paid via SBI MOPS Online Payment Gateway Mode Only.

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- (ii) After Tender opening, the EMD of the unsuccessful bidder will be returned to account provided by the bidder during the bid preparation as given in challan under Beneficiary Account Number.

Earnest Money in the form of cheques or any other form except above will not be accepted.

- (iii) The amount will be refunded to the unsuccessful tenderers on deciding about the acceptance or otherwise of the tender. In case of successful tenderer, it will be refunded on his paying initial Security Deposit and completing the tender documents in form B-1.
- (iv) Earnest money Exemption certificate will not be accepted. Earnest money shall be paid via SBI MOPS Online Payment Gateway Mode Only.

1.9 SECURITY DEPOSIT :

The successful tenderer shall have to pay half of the security deposit in approved security form (preferably in the form of National Saving Certificate) or in cash or in the form of Bank Guarantee (in the form as prescribed by Government) from any Scheduled Bank or Nationalised Bank and balance Security Deposit will be recoverable through the bills at the percentage as shown in item(s) of the Memorandum in printed B-1 form or as may be decided by the Executive Engineer during course of execution of the work looking to the position and circumstances that may prevail, whose orders will be final and binding on the contractor. The security deposit for the due performance of the contract shall be as detailed in the Tender Documents elsewhere. Fifty percent of the security deposit will have to be deposited within **ten days** (including Government holidays) of the acceptance of the tender and the remaining fifty percent will be recovered from until the completion of the fifty percent work of Running Bills at the rate as specified in the tender form, on the cost of work as per C.S.R. prevailing at the time of acceptance of tender. Amount of total security deposit to be paid shall be **2%** of the cost of work, worked out as per **P.W.D. Electrical C.S.R.-2023-24**. Initial Security Deposit may be in **Bank Guarantee form In format on Page No. to** of tender document for full period of completion of work and it should be extendable upto expiry of valid extension if any, as directed by Engineer-in-charge.

1.9.A Additional Security Deposit (Performance Security)

PERFORMANCE SECURITY in case of offer below the cost put to tender as per Marathi GR of WRD शासन निर्णय क्रमांक निविदा ०४१७/प्र.क्र. २४७/मोप्र.१ दि.३०/११/२०१८.

1.9.1 If the tenderer has quoted the offer below than the estimated rates put to the tender, the tenderer shall have to submit Additional Performance Security Deposit (APSD) (Performance Security) in the form of DD/Bank Guarantee of any Nationalized or Scheduled bank in favour of the **Executive Engineer, Raigad Irrigation Division, Kolad. It is mandatory to each tenderer that he shall submit sealed envelope bearing name of agency, name of work and tender notice number which contains the original DD/Bank Guarantee.** The additional performance security deposit shall be submitted to office of the Executive Engineer **within 8 Days from the opening of the envelope no 2.** The Name of work and e-tender number shall be written on the envelope. The amount of the (ASD) DD/Bank Guarantee shall be calculated by the tenderer in accordance with the following manner.

1.9.2 If the tenderer has quoted below to the estimated rates, the additional security deposit (performance Security) shall be paid additionally as mentioned below.

Rate Quoted to estimated rate	<u>Additional Security Deposit</u> (Performance Security)
Below 0% to 1%	Nil
Below 1% to 10%	1% of Estimated cost put to tender
Below than 10 % to 15%	% of ASD = (% rate quoted -10%) eg. If 14% below is quoted the amount of performance security (Additional Security Deposit) shall be (14-10) +1 = 5% Performance Security of estimated cost put to tender.
Below than 15%	Additional Security Deposit shall be Double after 15% Eg. If 19% below is quoted the amount of performance security (Additional Security Deposit) shall be (6% + (19%-15%) X 2%)= 14%

1.9.3 The DD/Bank Guarantee shall be valid after 1 month Defect Liability Period of the tender. It should bear MICR and IFC code. Submit DD/ Bank Guarantee in office of executive engineer on the date specified in schedule of opening financial envelop.

1.9.4 After opening the envelope no.1, if it is found that the tenderer is not qualified for opening of envelope no.2, then his Bank Guarantee shall be returned within 7 working days. Also after opening envelope no.2, except the D.Ds. of 1st and 2nd lowest bidders, the D.Ds. of other bidders shall be returned within 7 working days.

- 1.9.5** DD/Bank Guarantee of the 2nd lowest bidder shall be returned within 3 working days after the issue of work order to the 1st lowest bidder.
- 1.9.6** In case it is found that the documents/Bank Guarantee submitted by the tenderer are false or misleading his earnest money shall be forfeited. Also the registration of the tenderer shall be suspended for the period of 1 year. Additionally legal action may be initiated against the tenderer.
- 1.9.7** The work order shall be given to the concerned tenderer after the clearance of the Demand Draft submitted by him.

REFUND OF PERFORMANCE SECURITY

- 1.9.8** The amount of the performance security shall be refunded as per the Government of Maharashtra Marathi GR of WRD शासन निर्णय क्रमांक निविदा ०४१७/प्र.क्र. २४७/१७मोप्र.१ दि. ३०/११/२०१८.
- 1.9.9** Non submission of additional security deposit and performance security or submission of less amount of the additional security deposit shall be liable to summarily rejection of his tender. This additional security deposit shall be extendable upto expiry of valid extensions if any and it shall be refunded along with defect liability period, after satisfactory completion of work.

(Condition for Performance Security Deposit if the offer is received more than 1% below)

“In case the tenderer offers the rates lower than 1% below the estimated cost put to tender, in that case, the tenderer will have to pay Additional Security Deposit along with the Initial Security Deposit, for performance of work. The amount of Additional Security Deposit shall be amount exceeding 1% below offer, in the form of DD/Bank Guarantee or interest bearing securities of Nationalised Bank/ Scheduled Bank, pledged in favour of the Executive Engineer or in the form of Bank Guarantee for full period of completion of work”.

1.10 ISSUE OF FORMS:

Information regarding contract as well as blank tender forms can be downloaded from the e-Tendering website upon providing the details of the payment of cost as detailed in the N.I.T.

1.11 TIME LIMIT :

The work is to be completed within time limit as specified in the N.I.T. which shall be reckoned from the date of written order for commencing the work and shall be inclusive of monsoon period.

1.12 TENDER RATE :

No alteration in the form of tender and the schedule of tender and no additions in the scope of special stipulation will be permitted. Rates quoted for the tender shall be taken as applicable for all leads and lifts.

1.13 TENDER UNITS:

The tenderers should particularly note the unit mentioned in the Schedule "B" on which the rates are based. No change in the units shall be allowed. In the case of difference between the rates written in figures and in words, the correct rate will be the one, which is lower of the two.

1.14 CORRECTION:

No corrections shall be made in the tender documents. Any corrections that are to be made in the documents submitted by tenderer shall be made by crossing the incorrect portion and writing the correct portions above with the initials of tenderer.

1.15 TENDER'S ACCEPTANCE:

Acceptance of tender will rest with the **Executive Engineer, Raigad Irrigation Division, Kolad** who reserves the right to reject any or all tenders without assigning any reason therefore. The tenderer whose tender is accepted will have to enter in to a regular B-1 agreement within 10 days of being notified to do so. In case of failure on the part of Tenderer to sign the agreement within the stipulated time, the earnest money paid by him shall stand forfeited to the Government and the offer of the tenderer shall be considered as withdrawn by him.

1.16 CONDITIONAL TENDER:

The tenders which do not fulfill the condition of the notification and the general rules and directions for the guidance of contractor in the agreement form or are incomplete in any respect are likely to be rejected without assigning any reason therefore.

- (a) The Tenderers shall be presumed to have carefully examined the drawings, conditions and specifications of the work and have fully acquainted themselves with all details of the site, the conditions of rock and its joints, pattern, river, weather characteristics, labour conditions and in general with all the necessary information and data pertaining to the work, prior to tendering for the work.
- (b) The data whatsoever supplied by the Department along with the tender documents are meant to serve only as guide for the tenderers while tendering and the Department accepts no responsibility whatsoever either for the accuracy of data for their comprehensiveness.

- (c) The quarries for extraction of metal, murum etc. provided in the sanctioned estimate are as per survey conducted by the Department. The Contractor should however examine these quarries and see whether full quantity of materials required for execution of the work strictly as per specification are available in these sources before quoting the rates. In case the materials are not available due to reasons whatsoever, the contractor will have to bring the materials from any other sources with no extra cost to Government. The rates quoted, should therefore be for all leads and lifts from wherever the materials are brought at site of work and inclusive of royalty to be paid to the Revenue Department by the Contractor.

1.18 POWER OF ATTORNEY:

If the tenderers are a firm or company, they should in their forwarding letter mention the names of all the partners together with the name of the person who holds the power of Attorney, authorizing him to conduct all transactions on behalf of the body, along with the tender as per scanned copy uploaded in envelope No. 1.

- 1.19** The tenderer may, in the forwarding letter, mention any points he may wish to make clear but the right is reserved to reject the same or the whole of the tenders if the same become conditional tender thereby.

- 1.20** The contractor or the firms tendering for the work shall inform the Department if they appoint their authorized Agent on the work.

- 1.21** No foreign exchange will be released by the Department for the purchase of plants and machinery for the work by the Contractor.

- 1.22** Any dues arising out of contract will be recovered from the contractor as arrears of Land Revenue if not paid amicably. Moreover, recovery of Government dues from the Contractors will be affected from the payment due to the Contractor from any other Government works under execution with them.

- 1.23** All scanned pages of tender documents, conditions, specifications, corrections slips, forwarding letter mentioning all items of schedule B as per specifications mentioned in schedule C etc. shall be initialed by the tenderer. The tender should bear full signature of the tenderer, or his authorized power of Attorney holder in case of a firm.

- 1.24** The Income Tax at prevailing rates including surcharges or percentage in force from time to time or at the rate as intimated by the competent Income Tax authority shall be deducted from bill amount whether measured bill, advance payment or secured advance.

- 1.25** The successful tenderer will be required to produce to the satisfaction of the specified concerned authority a valid concurrent license issued in his favor under the provisions of the Contract Labour (Regulation and Abolition) Act 1970 for starting the work. On failure to do so, the acceptance of the tender shall be liable to be withdrawn and also liable for forfeiture of the earnest money.
- 1.26** The tenderer shall submit the list of apprentices engaged by the Contractor under Apprentice Act.
- 1.27** **VALIDITY PERIOD :**
The offer shall remain open for acceptance for minimum period of **60 days** from the Date of opening of Envelope No. 2 (Financial Bid) and thereafter until it is withdrawn by the contractor by notice in writing duly addressed to the authority opening the tender and sent by Registered Post Acknowledgment due.

WORK SPECIFIC INFORMATION

1.0 NAME OF WORK: -

Providing, fixing, installation & commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backup & smart intelligent interface connectivity etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project.

1.1 DESCRIPTION OF THE PROJECT:

The work comprises of mainly following items.

Providing, fixing, installation, commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backup and smart intelligent interface connectivity etc. complete at Bhira Pick up wear & Rawalje Dam.

Availability of Material :

All materials required for this work is available within reasonable leads. However, the contractor should verify the availability of materials before submitting his offer and no claim in this regard shall be entertained by the department.

1.2 STATUS OF THE PROJECT:

1.3 CLIMATIC CONDITIONS:

The work site is situated in high rain fall zone with an average of 3000 mm . The rainy season normally commences from early June and lasts upto about mid of October. However off season showers do occur.

1.4 SCOPE OF THE WORK :

The work under this tender includes following principle features.

Sr. No.	Item	Unit	Qty
1.	Item No.1 Providing, Fixing, Installation, Commissioning, Testing, Training & Maintaining Latest advanced Digital Transmission Control Protocol based Infrared, stationary Security Monitoring & Supervision devices with Original Equipment Manufacturer's (OEM) of branded companies along with CE, BIS & FCC certification for monitoring & supervision of entrance & exit gates / roads & essential locations on dam site for security of different locations of dam site etc. complete.	Each	2
2.	Item No.2 Providing, Fixing, Installation of Latest advanced Digital Transmission Control Protocol based Remotely controllable high speed mini dome outdoor Pantiltzoom Security Monitoring & Supervision devices with Original Equipment Manufacturer's (OEM) of Specified branded companies along with CE, BIS & FCC certification	Each	3

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Sr. No.	Item	Unit	Qty
	along & Weatherproof & Vandal proof housing for monitoring & supervision of complete site for overall security of site etc. Complete.		
3.	Item No.3 Providing, Fixing, Installation of Latest advanced Digital Transmission Control Protocol based 8Ch Network Video Recorder with Original Equipment Manufacturer's (OEM) of Matrix/Uniview/Wbox branded companies along with CE, BIS & FCC certification etc. complete	Each	2
4.	Item No.4 Providing, Fixing, Installation, Commissioning, Testing, Training & Maintaining of high quality, latest & advance Recording & Storage Unit storage capacity of minimum 1 TB (Tetra Byte) etc. Complete.	TB	8
5.	Item No.5 Providing, fixing & installation of high quality, latest & advance Video Secure Outdoor Weatherproof Heavy Duty Aluminium Housing Mount Enclosure along with brackets & clamps etc. Complete.	Each	2
6.	Item No.6 Providing, fixing & installation of high quality, latest & advance Industrial Grade, durable 5 V , 12 V , 24 V Dc to Buck & Boost Regulated Voltage Power Supply etc. Complete.	Each	14
7.	Item No.7 Splicing (making joints of optical fibre cable) of FR grade pvc armoured multimode armoured multimode optical fibre cable with the help Splicing machine etc. Complete.	Each	27
8.	Item No.8 Supplying and erecting 30Ah Lifepo4 (Lithium Ion) battery etc. Complete.	Each	5
9.	Item No.9 Supplying and erecting 80Ah Lifepo4 (Lithium Ion) battery etc. Complete.	Each	16
10.	Item No.10 Providing, fixing & installation of high quality, latest & advance MPPT Solar Charge Controller etc. Complete	Each	19
11.	Item No.11 Providing, fixing & installation of class A, water resistant & durable, Ingress Protection 67, BIS compliant Solar panel etc. Complete	Each	35
12.	Item No.12 Providing, fixing & installation of water resistant, durable & weatherproof Solar stand etc. Complete.	Each	35
13.	Item No.13 Supply, Installation, Testing, Integration & Commissioning of 49" LCD monitor at Conf. Room for display of total water system (Online)	Each	1
14.	Item No.14 Supplying and fixing 9U Hybrid IP66 outdoor mount server rack with pole mount bracket (Dimension- DxWxH - 500x550x450 mm) as per specification no. WG-NAS/RAK	Each	6
15.	Item No.15 Supplying and fixing 24 U floor mount rack (Dimension-DxWxH – 800x600x1265 mm) as per specification No. WG-NAS/RAK	Each	2
16.	Item No.16 Providing, Fixing, Installation of high quality, latest & advance lan to media convertor Connection device with metal cover etc. Complete.	Each	26
17.	Item No.17 Supplying, fixing, and configuring modularised multi-service router 802.11/a/n/ac	Each	4

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Sr. No.	Item	Unit	Qty
	unified Wave 2.5 GHz, with RJ-45 port, supporting 1 to 13 channels for 2.4 GHz, with unified wireless access point complete		
18.	Item No.18 Supplying and installing LSZH sheathed HDPE insulated copper cat-6A cable suitable for networking compliant with ANSI/TIA-568.2-D standards in provided conduit/casing-n-capping as per specification no. WG-ELVC/NC	Mtr	214
19.	Item No.19 Supplying and fixing 2 m 24 AWG multi stranded UTP patch cord with RJ-45 factory crimped connector of cat 6A type compliant ANSI/TIA-568.2-D standards in position as per specification no. WG-ELVC/PC	Each	28
20.	Item No.20 Supplying, fixing, and configuring 8-ports managed gigabit, layer-2 switch, 10/100/1000 base-T, PoE smart switch plus 2 SFP erected in provided rack compliant with IEEE 802.3 standards complete.	Each	9
21.	Item No.21 Supplying, fixing, and configuring 10G Base -SR (SFP+) MM transceiver compliant with IEEE 802.3 standards erected in provided rack complete.	Each	8
22.	Item No.22 Supplying and plugging 3 m fibre patch cord LC-LC MM (50) OM3 LSZH duplex complete compliant to IEC 60793/IEC 60794 standards as per specification no. WG-ELVC/FPC	Each	18
23.	Item No.23 Supplying and fixing IP66 ABS enclosure for fibre splicing with raised hinged splice trays to house up to 48 fibers with multiple galnd entry points including heat shrink splice protectors complete.	Each	6
24.	Item No.24:- Supplying and erecting 12 fibers LSZH armoured multimode optical fibre cable with , core dia 50/125 µm (OM3), suitable up to 10 GBPS, compliant to IEC 60793/IEC 60794 standards, on wall/ceiling or laid in provided pipe/trench as per specification no. WG-ELVC/OFC	Mtr	330
25.	Item No.25 Supplying, erecting & terminating 5 m HDMI cord low voltage grade minimum 4k compliant to be laid in provided conduits with male/female 19pin HDMI connectors complete.	Each	2
26.	Item No.26 Supplying and erecting mains with 2x1.5 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	Mtr	292
27.	Item No.27 Supplying and erecting HMS PVC conduit FRLS grade 25 mm dia. With PVC accessories on wall /ceiling as per specification No: WG-MA/CON.	Mtr	349
28.	Item No.28 Providing, fixing & installation of high quality, latest & advance LED light system with Motion detection control & multicolour LED lighting (Optional) for the work of - Providing, fixing, installation, commissioning of latest	Each	4

Contractor

No. of Corrections

SDE
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RID Kolad

Sr. No.	Item	Unit	Qty
	advanced specialised Wi-Fi /Wired Transmission control based security monitoring & supervision system with smart intelligent interface connectivity along with all required software, hardware, electronics, electrical, civil works & alternative power backup etc.		
29.	Item No.29 Providing required programming (customized / developed as per site requirement / in-built / on line Software) & Onetime Commissioning, testing & training (immediately after commissioning, for any number of persons) with skilled manpower, professional charges etc. complete.	Per System	1
30.	Item No.30 Service charges for providing & implementing services for any available network with low upload speed (Min. 5 to 10 MBPS variable or constant) within line of sight for visual monitoring of remote smart dam system security monitoring devices from anywhere for any one permanent location including all necessary hardware support & one-year on-site comprehensive warranty & service charges etc. complete.	Per SMD/ year	2
31.	Item No.31 Yearly subscription & licensee fees for Supply Installation testing and commissioning of Centralized Video monitoring Software with perpetual license for live monitoring and instant playback with one-year service plan & on-site comprehensive warranty & service charges etc. complete. (Centralized monitoring acts as a constant watch-dog, ensuring tighter security and preventing unexpected events), Live monitoring of events & to brings all locations closer, improving visibility, control, compliance and productivity, Well-planned and consistent security policy with centralized control through a single system, Single dashboard for consolidated live view of video from anywhere in the world, centrally defined, controlled and owned responsibility for video surveillance. The same shall be done without any additional cost with one-year on-site comprehensive warranty & service charges etc. complete.	Per SMD/ year	2
32.	Item No.32 Supply Installation testing and commissioning of Video Management System (Perpetual License) including on-site warranty & service charges etc. complete. The Video Management System shall incorporate fully integrated matrix functionality for distributed viewing of any security monitoring device in the system from any smartphone or a tablet (a mobile device) with the client viewer. VMS shall provide the ability to save any event that was tagged as an alarm (video motion detection, video loss or input) received, to be saved. The VMS shall be capable of being deployed in a virtualized environment without loss of any functionality. VMS shall	Per SMD/ year	2

Contractor

No. of Corrections

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Sr. No.	Item	Unit	Qty
	support video streams up to at least 60fps Monitoring module shall allow for continuous monitoring of the operational status and event-triggered alarms from, cameras and other devices. Viewing live video from security monitoring devices on the surveillance system with Playback recordings from cameras on the surveillance system, with a selection of advanced navigation tools, including an intuitive timeline browser. VMS shall support access and view of security monitoring device on a smartphone or a tablet (a mobile device) .The same shall be done without any additional cost with one-year on-site comprehensive warranty & service charges etc. complete.		

1.5 TENDER DATA-

1.5.1	Name of work	Providing, fixing, installation & commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backou & smart intelligent interface connectivity etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project.
1.5.2	Estimated Cost.	Rs.67,21,586/-
1.5.3	Processing Fees for financial / Bid Evaluation	-----nil-----
1.5.4	Earnest money (EMD)	Rs. 67,300 (1%) (Rupees Sixty Seven Thousand Three Hundred only)
1.5.5	Mode of payment (EMD)	Tender fee & E.M.D. amount shall be paid through E- payment gateway through RTGS/NEFT from bidders own bank account only.
1.5.6	Performance Security	As per in detailed tender notice
1.5.7	Security Deposit a) Initial 1 %	Rs. 67,300 in the form of F.D. OR B.G.
1.5.8	b) Balance S.D. (1% of the accepted Tender Cost)	Rs. 67,300 Through R.A. bills (at the rate of 2% till the whole S.D. is recovered)
1.5.9	Mode of Submission of Tender	Tender should be Submitted on-line

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		on https://mahatenders.gov.in
1.5.10	Class of Contractor	Not Necessary
1.5.11	Pre-Tender conference for interested bidders	---
1.5.12	Period of completion of work	12 Calendar months
1.5.13	Contact Details of Executive Engineer Name of Division Address Email: Phone: Fax:	Executive Engineer Raigad Irrigation Division, Kolad Tal.Roha, Dist.Raigad eerid24@gmail.com 02194/250857
1.5.14	Contact Details of Superintending Engineer Name of Circle Address Email: Phone: Fax:	Superintending Engineer, Thane Irrigation Circle, Thane Sinchan Bhavan, Kopari, Thane-03 seticthn@gmail.com 022-25329859 022-25329124
1.5.15	Contact Details of Chief Engineer Address Email: Phone: Fax:	The Chief Engineer, (W. R.) Water Resources Department, Konkan region Mumbai cewrdrkr@gmail.com Tel. (022) 22672232/22674442
1.5.16	Mode of Payment	Via SBI MOPS Online Payment Gateway Mode Only
1.5.17	Tender Opening Authority	Executive Engineer Raigad Irrigation Division, Kolad Tal.Roha, Dist.Raigad
1.5.18	Date & Time of opening Tender	
1.5.18	Venue of opening	Executive Engineer Raigad Irrigation Division, Kolad Tal.Roha, Dist.Raigad
1.5.19	Any addendum/ corrigendum /cancellation	Any addendum/corrigendum/cancellation of above tender will be published on the web-site https://mahatenders.gov.in , and on the notice board of Office of the Executive Engineer, Raigad Irrigation

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		Division, Kolad. The system shall generate a mail to those Bidders who have already participated in this tender and those Bidders if they wish can modify their tenders.
1.5.20	Bid Documents	Bid Documents consisting of, information and eligibility criteria, plans, specification and schedule of quantities of the works are available on web-site https://mahatenders.gov.in and the set of terms and conditions of contract and other necessary documents can be seen on the web-site till last date of sale and receipt of tender papers. Interested bidder may obtain further information at the web-site Portal: https://mahatenders.gov.in
1.5.21	Bid Documents acceptance period	The bid for the work shall remain open for acceptance for a period of 60 days from the last date of receipt of bids. If any bidder withdraws his bid/ tender before the said period or makes any modification in the terms and condition of the bid, the EMD at the time of submission of tender shall stand forfeited.
1.5.22	Other details	Other details including details of Portal Registration, Submission of bid, Resubmission and withdrawal of bid can be seen in the bidding documents which is available in web-site https://mahatenders.gov.in
1.5.23	Documents to be uploaded	The scanned copies of original Documents should be uploaded on above mentioned web-site as per this Tender Booklet and should be produced in the verification on

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		<p>demand after opening of the Technical Bid.</p> <p>The Bidders who participated in the on line bidding can witness opening of the bid from any system logging on to the portal https://mahatenders.gov.in away from opening place. The bids can only be opened by the pre-designated officials only after the opening time mentioned in the bid. In the event of the specified date of bid opening being declared a holiday the bid will be opened at the appointed time and location in the next working day. Date, time, and place of opening of BOQ shall be intimated separately</p>
1.5.24	Authority of Right to reject	Authority reserves the right to reject any or all the tenders without assigning any reasons thereof
1.5.25	Tender Acceptance Authority	Executive Engineer, Raigad Irrigation Division, Kolad-Roha

1.6 WORK AND SITE DETAILS: -

1.6.1	Location	At. Bhira, Tal. Mangaon, Dist. Raigad
1.6.2	Nearest railway Station.	Mangaon
1.6.3	Nearest Airport.	Santacruz Domestic Airport
1.6.4	Roads.	Approachable by all fair road
1.6.5	Nearest Telephone & Telegraph facility.	Mangaon.
4.6.6	Nearest Petrol and Diesel pump.	Bhira
4.6.7	Position of land acquisition.	Required place for this work is possession of WRD Deptt.
4.6.8	Position of funds.	Available

1.7 PERIOD OF COMPLETION: - 12 Calendar months

1.8 CONSTRUCTION PROGRAMME & OF MAJOR ITEM TO BE EXECUTED

Work program separately attached.

1.9 Cost of cement for mix variation: -

i) If the cement is procured by the contractor: - **Not Required**

Contractor

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1.10 Updated estimated Cost of the work based upon SSR **Rs. 67.22 lakh**
2023-24 when tenders were invited.

1.11 Rate of Royalty: - Rates of royalty of various construction materials to be recovered From R.A. Bills as per Clause-36.

Sr. No	Item	Material	Unit	% of Consumption	Rate of Royalty Charges / Cum Rs. /Cum
NIL					

Contractor

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परिशिष्ट-१**१. मराठी नमुना सत्यप्रतिज्ञापत्र (रु.५००/- च्या स्टॅम्प पेपरवर)****सत्यप्रतिज्ञापत्र (Affidavit)**

मी वय वर्षे राहणार..... या सत्यप्रतिज्ञा पत्राद्वारे लिहून देतो की, मी या फर्मचा / कंपनीचा मालक असून या कामासाठी निविदा सादर करित आहे. त्या निविदेच्या लिफाफा क्र.१ मध्ये जी कागदपत्रे सादर केली आहेत ती खरी, बरोबर व पूर्ण आहेत, त्यामध्ये कोणत्याही त्रुटी, चुका नाहीत, याची मी खात्री केलेली असून असे शपथपूर्वक खालील अटी व शर्तीसह मान्य करित आहे. या कागदपत्रांमध्ये काही चुकीची, दिशाभूल करणारी, खोटी व तसेच अपूर्ण माहिती आढळल्यास मी भारतीय दंडसंहिता अंतर्गत कायदेशीर कार्यवाहीस पात्र राहीन.

१. जर कंत्राट कालावधीदरम्यान, मी, माझ्या कार्यालयाने किंवा माझ्या कर्मचाऱ्यांनी जलसंपदा विभागाला कोणतीही खोटी माहिती किंवा देयकासमवेत तसेच पत्रव्यवहारात खोटी / बनावट साहित्य खरेदीची कागदपत्रे सादर केली असल्यास, मी भारतीय दंडसंहिता अंतर्गत कायदेशीर कार्यवाहीस पात्र राहीन.
२. जर कंत्राट कालावधीदरम्यान आणि काम समाप्ती नंतर, अंतिम देयक देण्याच्या तारखेपर्यंत सादर केलेले कोणतेही कागदपत्रे खोटी / बनावट किंवा फसवी आढळल्यास, मी भारतीय दंडसंहिता अंतर्गत कायदेशीर कार्यवाहीस पात्र राहीन.
३. जर काम समाप्तीनंतर दोष दायित्व कालावधी दरम्यान किंवा त्यानंतर कोणत्याही वेळी, कोणतीही माहिती किंवा कागदपत्रे खोटी / बनावट, फसवी किंवा दिशाभूल करणारी आढळल्यास, मी भारतीय दंडसंहिता अंतर्गत कायदेशीर कार्यवाहीस पात्र राहीन.

OR

(1) English

Affidavit (on Rs.500/- Stamp Paper)

I age address (Authorized signatory to sign the contract), hereby submit, vide this affidavit in truth, that I am the owner of the contracting firm...../ authorized signatory and I am submitting the documents in envelope no.1 for the purpose of scrutiny of the contract. I hereby agree to the conditions mentioned below :-

1. I am liable for action under Indian Penal Code for submission of any false / fraudulent paper / information submitted in envelope no.1.
2. I am liable for action under Indian Penal Code if during contract period and defect liability period, any false information, false bill of purchases supporting proof of purchase, proof of testing submitted by my staff, subletting company or by myself, I will be liable for action under Indian Penal Code.
3. I am liable for action under Indian Penal Code if any paper are found false / fraudulent during contract period and even after the completion of contract (finalization of final bill).

~~—(On stamp paper worth Rs. 500/-)~~

MODEL FORM OF BANK GUARANTEE BOND

~~In consideration of the Governor of Maharashtra (here in after called “The Government”) _____ having _____ agreed _____ to _____ exempt (here in after referred to as “The Contractor”) from depositing with the Government in cash the sum of Rs. _____ (Rupees _____
 _____ Only) _____ being _____ the amount of security deposit payable by the Contractor to the Government under the terms and conditions of the agreement dated the _____ day of _____ and made between the Government of the on part and the Contractor of the other part (here in after referred to as “the said agreement”) for _____ as security for the observance and performance by the Contractor of the terms and conditions of the said Agreement, on the contractor furnishing to the Government and guarantee in the prescribed form of a Schedule Bank in India being in fact these presents in the like sum of Rs. _____ (Rupees _____
 _____ Only). We _____ BANK/LIMITED registered in India under _____ Act and having one of our local Head Office at _____ do hereby:~~

~~1. _____ Guarantee to the Government:~~

~~a) _____ Due performance and observance by the Contractor of the terms. Covenants and conditions on the part of the contractor contained in the said Agreement and~~

~~b) _____ Due and punctual payment by the Contractor to the Government of all sums of money, losses, damages, cost charges, penalties and expenses payable to the Government by the Contractor under or in respect to the said agreement.~~

~~2. _____ Undertake to pay to the Government on demand and without demand and not withstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding filed in any court or tribunal relating there to the said sum of Rs. _____ (Rupees _____
 _____ Only) or such less may be demanded by the Government from us our liability hereunder being absolute and unequivocal and agree that.~~

~~3. _____ a) The guarantee herein contained shall remain in full force and effect during the subsistence of the said agreement and the same will continue to be enforceable till all the dues of the Government under or by virtue of the~~

Contractor

No. of Corrections

**SDE
BHEP Rawalje**

**Executive Engineer
RID Kolad**

~~said agreement have been duly paid and its claims satisfied or discharged and till the Government certifies that the terms and conditions of the said agreement have been fully, properly carried out by the Contractor.~~

~~b) We shall not be discharged or released from the liability under this guarantee by reason of:~~

~~i) Any change in the constitution of the bank or the Contractor or ;~~

~~ii) Any arrangement entered in between the Government and the Contractor with or without our consent ;~~

~~iii) Any forbearance or indulgence shown to he Contractor ;~~

~~iv) Any variation in the terms covenants or contained in the said agreement;~~

~~v) Any time given to the Contractor ;~~

~~vi) Any other conditions or circumstance under which, in law, a surety would be discharged ;~~

~~e) Our liability here under shall be joint and several with that of the Contractor as if we were principal debtors in respect of the said sum of Rs. _____ (Rupees _____ Only.) and~~

~~d) We shall not revoke this guarantee during its currency except with the previous consent in writing of the Government.~~

Not with standing anything contained herein:

~~1. — Our liability under this guarantee shall not exceed Rs.....~~

~~2. — This Bank Guarantee shall be valid up to Dt.....~~

~~3. — Our liability to make payment shall arise and we are liable to pay the guaranteed amount or any part thereof under this Guarantee, only and only if serve upon us a written claim or demand in terms of the guarantee on or before Dt..... without any demur, reservation, recourse, contest or protest and or without a reference to supplier and or without needing to prove or to show ground reason for demand of the sum specified herein above.~~

~~IN WITNESS WHERE OF the common seal of~~

~~_____ has been herein to affixed this _____ day
of _____ 20_____. The common seal of
was pursuant to the resolution of _____ the Board of Directors of the
company dated the _____ day of
herein affixed in the presence of who, in token thereof, have here
to set their respective hands in the presence of.~~

1. _____

2. _____

APPENDIX 'A'

DETAILS OF TECHNICAL PERSONNEL WITH THE CONTRACTOR

Sr. No	Description	Name	Length of Service in the Firm	Qualification	Professional experience & details of works	Remarks
1	2	3	4	5	6	7

Signature Of Contractor/Firm

Contractor

No. of Corrections

**SDE
BHEP Rawalje**

**Executive Engineer
RID Kolad**

APPENDIX 'B'**DETAILS OF PLANTS & MACHINERY IMMEDIATELY AVAILABLE WITH THE
TENDERER FOR USE OF THIS WORK****NAME OF THE TENDERER :-**

Sr. No.	Name of Equipment	No. of Units	Kind and make	Capacity	Age and condition	Present Location	Remarks
1	2	3	4	5	6	7	8

Signature Of Contractor/Firm

Contractor

No. of Corrections

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APPENDIX 'C'**DETAILS OF WORKS OF SIMILAR TYPE AND MAGNITUDE CARRIED OUT BY
THE TENDER**

Sr. No.	Name of Work	Place	Tendered cost Rs. In Lakhs	Time in months in which completed	Stipulated date of Completion	Principal feature
1	2	3	4	5	6	7

Signature Of Contractor/Firm

Contractor

No. of Corrections

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APPENDIX 'D'

DETAILS OF OTHER WORKS TENDERED FOR AND IN HAND ON THE DATE OF SUBMISSION OF TENDER

Sr. No.	Name of work	Place	Work in Hand			Works Tendered for			Remarks
			Tender cost	Cost of remaining work	Anticipated date of completion	Estimated Cost	Date on which decision is expected	Stipulated date of completion	
1	2	3	4	5	6	7	8	9	10

Signature Of Contractor/Firm

Contractor

No. of Corrections

**SDE
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APPENDIX 'E'

**DETAILS OF PLANTS AND MACHINERY PROPOSED TO BE USED FOR WORK
BUT NOT IMMEDIATELY AVAILABLE**

Sr No	Name of Equipme nt	No. of Unit s	Kin d and mak e	Capaci ty	If already owned			If to be purchas ed (When Month & Year)	Rema rk
					Age and conditi on	Locati on	Portable date of availabili ty		
1	2	3	4	5	6	7	8	9	10

Signature Of Contractor/Firm

Contractor

No. of Corrections

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RID Kolad

APPENDIX 'F'**DECLARATION OF THE CONTRACTOR**

I / Wehereby declare that I/We have made myself / ourselves thoroughly conversant with the subsoil conditions, the local conditions regarding all materials (such as stone, murum, sand etc.) and labour of which I/We have based my/our rates for this work. The specifications, conditions bore results and lead of materials on this work have been carefully studied and understood by me/us before submitting this tender. I/We undertake to use only the best materials approved by the **Executive Engineer, Raigad Irrigation Division, Kolad, Tal.Roha, Dist.Raigad** or his duly authorized assistant, before starting the work and to abide by his decision.

I/ We hereby further declare that my / our tender is unconditional in every manner of whatsoever in nature.

I / Wehereby undertake to pay the labourers engaged on the work as per Minimum Wages Act. 1948 applicable to the zone concerned.

I/we have quoted my/our offer in percentage rate in words as well as in figures. I/we further undertake to enter into contract in regular "B-1" form in Public Works Department.

**Name and Signature of Contractor(s)/
Power of attorney holder with complete address.**

Contractor

No. of Corrections

SDE
BHEP RawaljeExecutive Engineer
RID Kolad

APPENDIX 'G'
UNDER TAKING

1. I/We.....agree to accept the payments of the work done as and when the funds are made available by Konkan Irrigation Development Corporation, Thane.
2. So also, I/We.....Hereby agree to complete the work of may own cost and will not demand the payment of work done for minimum period of three years. I/We will not demand any claim on account of the pending liabilities with Konkan Irrigation Development, Thane.
3. I/We.....Also agree that we will not claim any price escalation for the work done beyond the stipulated time limit mentioned in the tender i.e.36 months from the date of issue of work order.
4. I/We.....agree this undertaking supersedes the clause No.10 of B-1 Form and clause No.17 of Special Conditions of Contract and may other clause regarding payment of bills. I/We also agree that this undertaking shall from a part and partial of original tender.

Signature Of the Contractor

शासन शुध्दीपत्रक क्र.निविदा-०४१७/प्र.क्र.२४७/मोप्र-१, दि.०५ जुलै, २०२२

परिशिष्ट – अ

Certifate of Geo-Tagging

- 1) Name of Work:-
- 2) Tender Notice No.
- 3) Name of person visiting the site
- 4) Date of Visit
- 5) Time of Visit to

I have uploaded Geo-Tagging photo in envelope no.1 along with this Certifate.

I have visited/studied scope of work, site conditions, Verfied provision in tender document, resources vailable and difficulties/restriction of site in all respect.

(Signature of Contractor

Or authorized representative)

Contractor

No. of Corrections

**SDE
BHEP Rawalje**

**Executive Engineer
RID Kolad**

APPENDIX 'K'
UNDERTAKING – 1

Undertaking of contractor regarding performance

To,

**The Executive Engineer,
Raigad Irrigation Division,
Kolad.**

Sir,

IContractor declare that during last
2 Years of the date of this undertaking,

1. As a contractor, I have never been penalized for any work carried out by me
nor I have been blacklisted by any Government Dept. previously.
2. I have not abandoned any work for reasons attributed to me.
3. I have not delayed completion of any work for reasons attributed to me.

I undertake that the above information is true to best of my
knowledge and belief. I am fully aware that my bid will be treated as nonresponsive
and will be summarily rejected at any time if above information is found to be false
and misleading by the concerned authority.

Signature of Contractor

Contractor

No. of Corrections

**SDE
BHEP Rawalje**

**Executive Engineer
RID Kolad**

APPENDIX 'L'
UNDERTAKING – 2

Undertaking about inclusion of all works in hand and correctness of data.

To,
The Executive Engineer,
Raigad Irrigation Division,
Kolad.

Sir,

1. I undertake that the above information in Tender Document are true and correct.
2. I have not omitted any work in hand i.e. information provided in form includes all the work in hand.
3. I know that if at any time, it is noticed that I have not submitted, information regarding all the work in hand (work in hand means, the works for which final bill is not passed and work is physically incomplete), that I will be disqualified from tender process at any stage of the bidding by the Department.

Signature of Contractor

Contractor

No. of Corrections

SDE
BHEP Rawalje

Executive Engineer
RID Kolad

APPENDIX 'M'
UNDERTAKING – 3

Undertaking about Personnel, Plants, Machinery and Equipments.

To,

**The Executive Engineer,
Raigad Irrigation Division,
Kolad.**

Sir,

1. I undertake that I will make available suitably qualified personnel, if the work is awarded to me.
2. I undertake that I will deploy the machinery required for the work, if the work is awarded to me.

Signature of Contractor

Contractor

No. of Corrections

**SDE
BHEP Rawalje**

**Executive Engineer
RID Kolad**

FORM B-1**PERCENTAGE RATE TENDER & CONTRACT FOR WORKS**

DEPARTMENT : **WATER RESOURCES DEPARTMENT**
REGION : **KOKAN REGION, MUMBAI**
CIRCLE : **THANE IRRIGATION CIRCLE, THANE**
DIVISION : **Raigad Irrigation Division, Kolad**
NAME OF WORK : **Providing, fixing, installation & commissioning of IoT based data transmission system along with custmized solutions & smart intelligent reconnaissance system with alternative power backou & smart intelligent interface connectivity etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project.**

General Rules and Directions for the Guidance of Contractors

1. All works proposed to be executed by contract shall be notified in a form of invitation to tender pasted on a board hung up in the office of the Executive Engineer and signed by the Executive Engineer.

This form will state the work to be carried out as well as the date for submitting and opening tenders, and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender and the amount of security deposit to be deposited by the successful tenders and the percentage, if any, to be deducted from bills. It will also state whether a refund of a quarry fees, royalties, dues and ground rents will be grant ad. Copies of the specification, designs and drawings, estimated rates, scheduled rates and any other documents required in connection with the work shall be signed by the Executive Engineer for the purpose of identification and shall also be open for inspection by contractors at the office of the **Executive Engineer, Raigad Irrigation Division, Kolad** during office hours. Where the works are proposed to be executed according to the specifications recommended by a contractor and approved by a competent authority on behalf of the Governor of Maharashtra such specifications with designs and drawings shall form part of the accepted tender.

2. In the event of the tender being submitted by a firm, it must be signed by each partner thereof, and if the event of the absence of any partner, it

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shall be signed on his behalf by a person holding a power of attorney authorizing him to do so.

- 2(A)(i) The contractor shall pay Earnest money the sum of **Rs. 67,300 (Rupees Sixty Seven Thousand Three Hundred only)** via SBI MOPS Online Payment Gateway Mode Only. The said amount of earnest money shall not carry any interest whatsoever.
- (ii) In the event of his tender being accepted, subject to the provisions of sub-clause (iii) below, the said amount of earnest money shall be appropriated towards the amount of security deposit payable by him under conditions of General Conditions of Contract.
- (iii) If, after submitting the tender contractor withdraws his offer, or modifies the same or if after the acceptance of his tender the contractor fails or neglects to furnish the balance of security deposit without prejudice to any other rights and powers of the Government, hereunder, or in law, Government shall be entitled to forfeit the full amount of earnest money deposited by him.
- (iv) If, after submitting the tender contractor withdraws his offer, or modifies the same or if after the acceptance of his tender the contractor fails or neglects to furnish the balance of security deposit without prejudice to any other rights and powers of the Government, hereunder, or in law, Government shall be entitled to forfeit the full amount of earnest money deposited by him.
- (v) In the event of his tender not being accepted, the amount of earnest money deposited by the contractor shall, unless it is prior thereto forfeited under the provisions of sub-clause (iii) above, be refunded to him on his passing receipt there for.
3. Receipts for payments made on account of any work, when executed by a firm, should also be signed by all the partners except where the contractors are described in their tender as a firm, in which case the receipt shall be signed in the name of the firm by one of the partners, or by some other person having authority to give effectual receipts for the firm.

4. Any person who submits a tender shall fill up the usual printed form stating at what percentage above or below the rates specified in Schedule 'B' (memorandum showing items of work to be carried out) he is willing to undertake the work. Only one rate or such percentage on all the estimated rates/Schedule rates shall be named. Tenders which propose any alteration in the works specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions, of any sort will be liable to rejection. No printed form of tender shall include a tender for more than one works but if contractor who which to tender two or more works, they shall submit separate tender for each. Tenders shall have the name and number of the work to which they refer, written outside the envelope.
5. The **Executive Engineer / Superintending Engineer** or his duly authorized Assistant shall open tenders in the presence of contractors who have submitted tenders or their representatives who may be present at the time, and he will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, the contractor shall for the purpose of identification, sign copies of the specifications and other documents mentioned in Rule-1. **In the event of a tender being rejected, the Divisional Officer shall refund the amount of earnest money deposited by the contractor online.**
6. The officer competent to dispose off the tenders shall have the right of rejecting all or any of the tenders.
7. No receipt for any payment alleged to have been made by a contractor in regard to any matter relating to this tender or the contract shall be valid and binding on Government unless it is signed by the Executive Engineer.
8. The memorandum of work to be tendered for and the schedule of materials to be supplied by the Department and their rates shall be filled in and completed by the office of the Executive Engineer before the tender form is issued. If a form issued to an intending tenderer has not been so filled in and completed he shall request the said office to have this done before he completes and delivers his tender.

- 9. All works shall be measured net by standard measure and according to the rules and customs of the Department and their rates shall be without reference to any local custom.
- 10. Under no circumstances shall any contractor be entitled to claim enhanced rates for items in this contract.
- 11. Every registered contractor should produce along with his tender certificate of registration as approved contractor in the appropriate class and renewal of such registration with date of expiry.
- 12. All corrections and additions or pasted slips should be initialed.
- 13. The measurements of work will be taken according to the usual methods in use in the Department and no proposals to adopt alternative methods will be accepted. The Executive Engineer's decision as to what is the usual method in use in the Department will be final.
- 14. The tendering contractor shall furnish a declaration along with the tender showing all works for which he has already entered into contract, and the value of work that remains to be executed in each case on the date of submitting the tender.
- 15. Every tenderer shall furnish along with the tender, information regarding the income-tax circle or ward of the district in which he is assessed to income tax the reference to the number of assessment and the assessment year, and a valid Income Tax clearance certificate, Permanent Account Number PAN No.....
- 16. In view of the difficult position regarding the availability of foreign exchange no foreign exchange would be released by the Department for the purchase of plant and machinery required for the execution of the work contracted for. (GCB/PWD/CFM/1058-62517 dt.26-9-59)
- 17. The contractor will have to construct shed for storing controlled and valuable materials issued to him under Schedule 'A' of the agreement, at the work site, having double locking arrangement. The materials will be taken for use in the presence of the Departmental person. No materials will be allowed to be removed from the site of works.

18. Successful tenderer will have to produce to the satisfaction of the accepting a valid and current license issued in his favour under the provision of Contract Labour (Regulation and Abolition Act, 1973) before starting work, failing which acceptance of the tender will be liable for withdrawal and earnest money will be forfeited to Government.
19. The contractor shall comply with the provision of the Apprentices Act 1961 and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Superintending Engineer, may in his discretion cancel the contract. The contractor shall also be liable, for any pecuniary liability arising on account of any violation by him of the provisions of the Act.
20. Contractor will be solely responsible and liable for action under Indian Penal Code for uploading or physical submission of any false/fraudulent document / information of envelope No. 1 & 2.
Contractor will be solely responsible and also liable for action under Indian Penal Code for submission of any false information, false bills / invoice / vouchers of purchase of material in supporting proof of purchase, proof of testing / test results and any other required documents submitted by his staff / representative or by himself or subletting company / contractor during contract period or even after completion of work till finalization of bill and completion of defect liability period.
If false information / documents are submitted as me mentioned above, the contractor will be blacklisted and if contract is at initial stage then such contract will be terminated and no any compensation will be payable on any account to the contractor. **In case of submission of false information/documents the Earnest Money Deposit/Security Deposit/Additional Performance Security Deposit shall be forfeited and the said agency shall be debarred from participation in any tender process for the period of three (3) years in Water Resource Department. WRD Staff / WRD Officers / Divisional Accounts Officer will not be responsible for any complications due to submission of false / fraudulent documents by the contractor as mentioned above.**
21. "Contractor shall make payments of salaries and wages to all the employees and Labouers through **bank account linked to Unique Identification Number (AADHAR CARD)**. and shall submit a certificate accordingly to the Engineer- in- charge. The certificate shall be submitted by the contractor within 60 days from the commencement of contract. If the time period of contract is less than 60 days, the such certificates shall be submitted within 15 days from the date of commencement of contract."

TENDER FOR WORK

I/We hereby tender for the execution, for the Governor of Maharashtra (here-in-before and here-in after referred to as "Government") of the work specified in the under written memorandum within the time specified in such memorandum at _____ percent **below/above** the estimated rates entered in Schedule 'B' (**Memorandum showing items of work to be carried out**) and in accordance in all respects with the specifications, designs, drawings, and instructions in writing referred to in Rule 1 hereof and in Clause 12 of the annexed conditions of contract and agree that when materials for the work are provided by the Government, such materials and the rates to be paid for them shall be as provided in Schedule 'A' here to.

** The tenderer shall quote his offer in BOQ through online bidding process only.*

MEMORANDUM

- | | | |
|---|---|---|
| <p>A) NAME OF WORK :</p> | <p>Providing, fixing, installation & commissioning of IoT based data transmission system along with custmized solutions & smart intelligent reconnaissance system with alternative power backou & smart intelligent interface connectivity etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project.</p> | <p><i>A) If several sub works are included they should be detailed in a separate list.</i></p> |
| <p>B) Estimated Cost :</p> <p>C) Earnest Money :</p> | <p>Rs. 67,21,586/-</p> <p>Rs. 67,300</p> | <p><i>C) The amount of earnest money to be deposited shall be in accordance with the provisions of paras 206 & 207 of the M.P.W. manual.</i></p> |
| <p>D) Security Deposit :</p> <p>i) Cash (Not less than the amount of earnest money.) :</p> <p>ii) To be deducted from current bills :</p> <p>Total :</p> | <p>Rs. 67,300</p> <p>Rs. 67,300</p> <p>Rs. 1,34,600/-</p> | <p><i>D) This deposit shall be in accordance with paras 213& 214 of the M.P.W.Manual.</i></p> |
| <p>E) Percentage, if any to be deducted from bills so as to make up the total amount required as security deposit by the time, half the work as measured by the cost is done</p> | <p>2% (TWO PERCENT)</p> | <p><i>E) This percentage where necessary deposit is taken will vary from 2 percent to 10 percent according to the requirements of the case. Where security deposit is taken see note 1 to clause 1 of conditions of contract.</i></p> |

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RID Kolad**

F) Time allowed for the work from the date of written order to complete.

12 (Twelve) Calendar months (including monsoon)

F) Give schedule where necessary, showing dates by which the various items are to be completed.

2. I/We agree that the offer shall remain open for acceptance for a minimum period of **60 days** from the date fixed for opening of envelope No.2 (Financial Bid) and thereafter until it is withdrawn by me/ us by notice in writing duly addressed to the authority opening the tenders and sent by registered post A.D. or otherwise delivered at the office of such authority Treasury Bank Challan No. and date or Deposit at Call Receipt No. and date _____ in respect of the sum of Rs. _____ (in words Rs. _____)

only) representing the earnest money is herewith forwarded. The amount of earnest money shall not bear interest and shall be liable to be forfeited to the Government, should I/We fail to (I) abide by the stipulation to keep the offer open for the period mentioned above or (II) Sign and complete the contract documents as required by the Engineer and furnish the security deposit as specified in item (d) of the memorandum contained in paragraph (1) above within the time limit laid down in clause (1) of the annexed General Conditions of contract. The amount of earnest money may be adjusted towards the security deposit or refunded to me/us if so, desired by me/ us in writing, unless the same or any part thereof has been forfeited as aforesaid.

3. I/We have secured exemption from payment of earnest money after executing the necessary bond in favour of the Government, a true copy of which is enclosed herewith. Should any occasion for forfeiture of earnest money for this work arise due to failure on my/our part to (i) abide by the stipulations to keep the offer open for the period mentioned above or (ii) sign and complete the contract documents and furnish the security deposit as specified in item (d) of the Memorandum contained in paragraph (1) above within the time limit laid down in clause (1) of the annexed General Conditions of Contract, the amount payable by me/us may, at the option of the Engineer, be recovered out of the amount deposited in lump sum for securing exemption in so far as the same may extend in terms of the said bond and in the event of the deficiency out of any other payments which are due or payable to me/us by the Government under any other contract or transaction of any nature whatsoever or otherwise.

4. Should this tender be accepted I/We hereby agree to abide by and fulfill all the terms, and provisions of the conditions of contract annexed hereto so far as applicable, and in default thereof to forfeit and pay to Government the sums of money mentioned in the said conditions.

Contractor : _____

Address : _____

**Signature of
Contractor before
submission of the**

Dated _____ The _____ day of _____ 2023

tender

(Witness) \$: _____

Address : _____

*\$ Signature of witness
to contractor's
signature*

(Occupation) : _____

The above tender is hereby accepted by me for and on behalf of the Governor of Maharashtra.

** Signature of the
officer by whom
accepted*

*Dated _____ day of _____ 2023. **
Executive Engineer

CONDITIONS OF CONTRACT

Clause 1:- The person/persons whose tender may be accepted (hereinafter called the Contractor, which expression shall unless excluded by or repugnant to the context include his heirs, executors, administrators, and assigns) shall (A) within 10 days (which may be extended by Superintending Engineer concerned upto 15 days if Superintending Engineer thinks fit to do so) of the receipt by him of the notification of the acceptance of his tender deposit with the Executive Engineer in cash or Government securities endorsed to the Executive Engineer (if deposited for more than 12 months) of the sum sufficient which will made up the full security deposit specified in the tender or (B) (Permit Government at the time of making any payment to him for work done under the contract to deduct such as will amount to * **Two** percent of all moneys so payable such deductions to be held by Government by way of security deposit.) Provided always that in the event of the Contractor depositing a lump sum by way of security deposit as contemplated at above, then and in such case, if the sum so deposited shall not amount to **Two** percent of the total estimated cost of the work, it shall be lawful for Government at the time of making any payment to the Contractor for work done under the contract to make up the full amount of **Two** percent by deducting sufficient sum from every such payment as last aforesaid until the full amount of the security deposit is made up. All compensation or other sums of money payable by the Contractor to Government under the terms of his contract may be deducted from or paid by the sale of sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due or may become due by Government to the Contractor under any other contract or transaction of any nature on any account whatsoever and in the event of his security deposit being reduced by reason of any such deduction or sale as aforesaid, the Contractor shall within ten days thereafter, make good in cash or Government securities endorsed as aforesaid any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit referred to, when paid in cash may, at the cost of the depositor, be converted into interest bearing securities provided that the depositor has expressly desired this in writing.

The security deposit will not be accepted in forms of insurance company bonds as per Government orders contained in No. CCM/PWD/4250 Dated 27/12/96.

*Security deposit
PWD. Resolution
No.CAT/1087/CR-94
Bldg 2 dt.14-6-89 and
21-6-2004*

**GR of WRD शासन निर्णय
क्रमांक निविदा 0417/(प्र.क्र.
247/17)मोप्र.1 दि.
30/11/2018**

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Note: This will be the same percentage as that in the tender at (e) **on page No 20.**

If the amount of the security deposit be paid in a lump sum within the period specified at (A) above is not paid the tender/contract already accepted shall be considered as cancelled and legal steps taken against the Contractor for recovery of the amounts. The amount of the security deposit lodged by a Contractor shall be refunded along with the payment of the final bill, if the date up to which the Contractor has agreed to maintain the work in good order is over. If such date is not over, only **50%** amount of security deposit shall be refunded along with the payment of the final bill. The amount of security deposit retained by the Government shall be released after expiry of period up to which the Contractor has agreed to maintain the work in good order is over. In the event of the Contractor failing or neglecting to complete rectification work within the period upto which the Contractor has agreed to maintain the work in good order, then subject to provision of Clauses 17 and 20 hereof the amount of Security Deposit retained by Government shall be adjusted towards the excess cost incurred by the Department on rectification work

Clause 2:- “The time allowed for carrying out the work as entered in the tender shall be strictly observed by the Contractor and shall be reckoned from the date on which the order to commence the work is given to the Contractor. The work shall through the stipulated period of the contract be proceeded with, with all due diligence (time being deemed to be the essence of the contract on the part of the Contractor) and Contractor shall pay as compensation an amount equal to one percent or such smaller amount as the Superintending Engineer (whose decision in writing shall be final) may decide, of the amount of the estimated cost of the whole work as shown by the tender for every day that the work remains uncommenced, or unfinished after the proposed dates . And further to ensure good progress during execution of the work, the contractor shall be bound in all cases in which the time allowed for any work exceeds one month to complete

Compensation for delay

25 % of the work in	1/4 of the time
50 % of the work in	1/2 of the time
100 % of the work in	12 (Twelve) months

As indicated in Bar Chart on Page No 110

Full work to be completed in 12 (Twelve) months including monsoon.

In the event of the contractor failing to comply with this condition he shall be liable to pay as compensation an amount equal to one percent or such smaller amount as Superintending Engineer (whose decision in writing shall be final) may decide of the said estimated cost of the whole work for every day that due quantity, of work remains incomplete. Provided always that the total

amount of compensation to be paid under the provisions of this clause shall not exceed 10 per cent of the estimated cost of the work as shown in the tender. Superintending Engineer shall be the final authority in this respect, irrespective of the fact that the tender is accepted by Chief Engineer/ Superintending Engineer / Executive Engineer.

Clause 3:- In any case in which under any clause of this contract the contractor shall have rendered himself liable to pay compensation amounting to the whole of this security deposit (whether paid in one sum or deducted by installments) or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause, the **Engineer**, on behalf of the Governor of Maharashtra, shall have power to adopt any of the following courses, as he may deem best suited to the interest of Government :-

(A) To rescind the contract (for which rescission notice in writing to the contractor under the hand of **Executive Engineer** shall be conclusive evidence) and in that case the security deposit of the contractor shall stand forfeited and be absolutely at the disposal of Government.

(B) To carry out the work or any part of the work departmentally debiting the contractor with the cost of the work, expenditure incurred on tools and plant, and charges on additional supervisory staff including the cost of work-charged establishment employed for getting unexecuted part of the work completed and crediting him with the value of the work done departmentally in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the **Executive Engineer** as to the costs and other allied expenses so incurred and as to the value of the work so done departmentally shall be final and conclusive against the contractor.

(C) To order that the work of the contractor be measured upto and take such part thereof as shall be unexecuted out of his hands, and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory

staff including the cost of work charged establishment and the cost of the executed by the new contract agency will be debited to the contractor and at the value of the work done or executed through the new contractor shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the term of his

contract. The certificate of the Executive Engineer as to all the cost of the work and other expenses incurred as aforesaid for or in getting the unexecuted work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor.

In case the contract shall be rescinded under clause (a) above the Contractor shall not be entitled to recover or be paid, any sum for any work therefor actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing the performance of such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified. In the event of either of the courses referred to in clause (b) or (c) being adopted and the cost of work executed departmentally or through a new contractor and other allied expenses exceeding the value of such work credited to the Contractors, the amount of excess shall be deducted from any money due to the Contractor, by Government under the contract or otherwise howsoever or from his security deposit or the sale proceeds thereof provided, however that the Contractor shall have no claim against Government even if the certified value of the work done departmentally or through a new contractor exceeds the certified cost of such work and allied expenses, provided always that whichever of the three courses mentioned in clauses (a) , (b) or (c) is adopted by the Executive Engineer, the Contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased, or procured any materials, or entered into any engagements or made any advances on account of, or with a view to the execution of the work or the performance of the contract.

Clause 4:- If the progress of any particular portion of the work is unsatisfactory, the Executive Engineer shall notwithstanding that the general progress of the work is in accordance with the conditions mentioned in clause 2, be entitled to take action under clause 3(b) after giving the Contractor 10 days notice in writing. The Contractor will have no claim for compensation, for any loss sustained by him owing to such action.

Clause 5:- In any case in which any of the powers conferred upon the **Executive Engineer** by clause 3 and 4 hereof shall have become exercisable and the same shall not have been exercised, the non exercise thereof shall not constitute a waiving of any of the conditions hereof and such powers shall

Action when the progress of any particular portion of the work is unsatisfactory.

Contractor remains liable to pay compensation if action not taken under Clause 3 & 4.

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notwithstanding be exercisable in the event of any future case of default by the contractor for which under any clause hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected. In the event of the **Executive Engineer** taking action under sub - clause (a) or (c) of clause 3, he may, if he so desires, take possession of all or any tools, plant, materials and stores, in or upon the works or the site thereof or belonging to the contractor, or procured by him and intended to be used for the execution of the work or any part thereof, paying or allowing for the same in account at the contract rates, or in the case of contract rates not being applicable at current market rates, to be certified

by the **Executive Engineer** whose certificate thereof shall be final. In the alternative, the **Executive Engineer** may, after giving notice in writing to the contractor or his clerk of the work, foreman or other authorized agent require him to remove such tools and plants, materials, or stores from the premises within a time to be specified in such notice, and in the event of the contractor failing to comply with any such requisition, the **Executive Engineer** may remove them at the contractor's expenses or sell them by auction or private sale on account of the contractor and at his risk in all respects, and the certificate of the **Executive Engineer** as to the expenses of any such removal and the amount of the proceeds and expense of such sale shall be final and conclusive against the Contractor.

Power to take possession of or require removal of or sell contractor's plant.

Clause 6:- If the Contractor shall desire an extension of the time for completion of work on the ground of his having been unavoidably hindered in its execution or on any other grounds, he shall apply in writing to the **Executive Engineer** before the expiry of the period stipulated in the tender or before the expiration of 30 days from the date on which he was hindered as aforesaid or on which the cause for asking for extension occurred, whichever is earlier and the **Executive Engineer**, may if in his opinion, there were reasonable grounds for granting an extension, grant such extension as he thinks necessary or proper. The decision of the **Executive Engineer** in this matter shall be final.

Extension of time.

Clause 7:- On the completion of the work the Contractor shall be furnished with a certificate by the Executive Engineer (hereinafter called the Engineer-in-

Final Certificate

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charge) of such completion, but no such certificate shall be given nor shall the work be considered to be completed until the Contractor shall have remove from the premises on which the work shall have been executed, all scaffolding, surplus materials and rubbish and shall have cleaned off the dirt from all woodwork, doors, windows, walls, floor or other parts of any building in or upon which the work has been executed, or of which he may have had possession for the purpose of executing the wok nor until the work shall have been measured by the Engineer-in-charge or where the measurements have been taken by his subordinates until they have received approval of the Engineer-in-charge, the said measurements being binding and conclusive against the contractor. If the Contractor shall fail to comply with the requirements of this clause as to the removal of scaffolding, surplus materials and rubbish and the cleaning of dirt on or before the date fixed for the completion of the work the Engineer-in-charge may at the expense of the Contractor, remove such scaffolding, surplus materials and rubbish, and dispose off the same as he thinks fit and clean off such dirt as aforesaid and the Contractor shall forthwith pay the amount of all expenses so incurred, but shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realised by the sale there of.

Clause 8 :- No payment shall be made for any work, estimated to cost less than Rupees One Thousand till after the whole of work shall have been completed and a certificate of completion given. But in the case of works estimated to cost more than Rupees One Thousand, the Contractor shall on submitting a monthly bill therefore, be entitled to receive payment proportionate to the part of the work then approved and passed by the Engineer - in- charge, whose certificate if such approval and passing of the sum so payable shall be final and conclusive against the Contractor. All such intermediate payments shall be regarded as payments by way of advance against the final payments only and not as payments for work actually done and completed, and shall not preclude the Engineer-in-charge from requiring any bad, unsound, imperfect or unskillful work to be removed or taken away and reconstructed or re-erected nor shall any such payment be considered as an admission of the due performance of the Contract or any part thereof in any respect or the occurring of any claim, nor shall it conclude, determine or affect in any other way the powers of the Engineer- in-charge as to the

Payment on intermediate certificate to be regarded as advances.

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final settlement and adjustment of the accounts or otherwise, or in any other way vary or affect the Contract. The final bill shall be submitted by the Contractor within one month of the date fixed for the completion of the work. otherwise the Engineer-in-charge's certificate of the measurements and of the total amount payable for the work shall be final and binding on all parties.

Clause 9:-The rates for several items of works estimated to cost more than Rs.1000/- agreed to within shall be valid only when the item concerned is accepted as having been completed fully in accordance with the sanctioned specifications. In cases where the items of work are not accepted as so completed, the Engineer-in-charge may make payment on account of such items at such reduced rates as he may consider reasonable in the preparation of final or on-account bills.

Payment at reduced rates on account of items of work not accepted as completed to be at the desecration of the Engineer in charge.

Clause 10:- A bill shall be submitted by the Contractor in each month on or before date fixed by the Engineer-in-charge for all works executed in the previous month, and the Engineer-in-charge shall take or cause to be taken the requisites measurement for the purpose of having the same verified and the claim, so far as it is admissible, shall be adjusted , if possible, within ten days from the presentation of the bill. If the Contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in- charge may depute a subordinate to measure up the said work in the presence of the Contractor or his duly authorized agent whose countersignature to the measurement list shall be sufficient warrant, and the Engineer-in-charge may prepare a bill from such list which shall be binding on the Contractor in all respect.

Bill to be submitted monthly.

Clause 11:- The Contractor shall submit all bills on the printed forms to be had on application at the office of the Engineer-in-charge. The charges to be made in the bills shall always be entered at the rates specified in the tender or in the case of any extra work ordered in pursuance of these conditions and not mentioned or provided for in the tender, at the rates here in after provided for such work.

Bills to be on printed form.

Clause 12:- If the specification or estimate of the work provides for the use of any special description of material to be supplied from the stores of the Public Works Department store or if it is required that the contractor shall use certain stores to be provided by the

Stores supplied by Government

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

Clause 12 (A):- All stores of controlled materials such as cement, steel etc., to be supplied by Government to the contractor should be kept by the contractor under lock and key and will be accessible for inspection by the **Executive Engineer** or his agent at all the times.

Clause 13:- The contractor, shall execute the whole and every part of the work in the most substantial and workman like manner, and both as regards materials and every other respect in strict accordance with specifications. The contractors shall also conform exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Engineer-in-charge and lodged in his office and to which the contractor shall be entitled to have access for the purpose of inspection at such office, or on the site of the work during office hours. The contractor will be entitled to receive three sets of contract drawings and working

***Works to be executed
in accordance with
specifications
drawings,
orders, etc.***

drawings as well as one certified copy of the accepted tender along with the work order free of cost. Further copies of the contract drawings and working drawings if required by him, shall be supplied at the rate of Rs.300/- per set of contract drawings and Rs.150/- per working drawing except where otherwise specified.

Clause 14:- The Engineer-in-charge shall have power to make any alterations in or additions to the original specifications, drawings, designs, and instructions that may appear to him to be necessary or advisable during the progress of the work, and the Contractor shall be bound to carry out the work in accordance with any instructions in this connection which may be given to him in writing signed by the Engineer-in-charge and such alteration shall not invalidate the contract, and any additional work which the Contractor may be directed to do in the manner above specified as part of the work shall be carried out by the Contractor on the same conditions in all respects on which he agreed to do the main work, and at the same rates as are specified in the tender for the main work. And if the additional and altered work includes any class of work for which no rates is specified in this contract, then such class of work shall be carried out at the rates entered in the Schedule of Rates of the Division prevailing at the time when the extra items crop up or at the rates mutually agreed upon between the Engineer-in-charge and the contractor whichever are lower. If the additional or altered work for which no rate is entered in the Schedule of Rates of the Division,

is ordered to be carried out before the rates are agreed upon then the Contractor shall within seven days of the date of receipt by him of the order to carry out the work inform the Engineer-in-charge of the rate which it is his intention to charge for such class of work, and if the Engineer-in-charge does not agree to this rate, he shall by notice in writing be at liberty to cancel his order to carry out such class of work, and arrange to carry it out in such manner as he may consider advisable provided always that the Contractor shall commence work or incur any expenditure in regard thereto before the rates shall have been determined as lastly here in before mentioned, then in such case he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of the determination of the rates as aforesaid according to such rate or rates as shall be

Alterations in specifications in designs not to invalidate contracts.

Rates for works not entered in estimate, or schedule of rates of the contract

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fixed by the Engineer-in-charge. In the event of a dispute, the decision of the Superintending Engineer of the Circle will be final. Where, however, the work is to be executed according to the designs, drawings and specifications recommended by the contractor and accepted by the competent authority the alterations above referred to shall be within the scope of such designs, drawings and specifications appended to the tender.

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

Clause 15:- (1) If at any time after the execution of the contract documents, the Engineer shall for any reason what-so-ever (other than default on the part of the Contractor for which the Government is entitled to rescind the contract) desires that the whole or any part of the work specified in the tender should be suspended for any period or that the whole or part of the work should not be carried out at all, he shall give to the Contractor a notice in writing of such desire and upon the receipt of such notice the Contractor shall forthwith suspend or stop the work wholly or in part as required, after having due regard to the appropriate stage at which the work should be stopped or suspended so as not to cause any damage or injury to the work already done or endanger the safety thereof provided that the decision of the Engineer as to the stage at which the work or any part of it could be or could have been safely stopped or suspended shall be final and conclusive against the Contractor. The Contractor shall have no claim to any payment or

compensation whatsoever by reason of or in pursuance of any notice as aforesaid, on account of any suspension, stoppage or curtailment except to the extent specified hereinafter.

(2) Where the total suspension of work ordered as aforesaid continued for a continuous period exceeding 90 days the Contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving a 10 days prior notice in writing to the Engineer, within 30 days of the expiry of the said period of 90 days, of such intention and requiring the Engineer to record the final measurements of the work already

Extensions of time in consequence of additions or alterations.

No claim to any payment or compensation for alteration in or restriction of work.

***CAT-1268/59382-Q
DT.14-3-74.***

done and to pay final bill. Upon giving such notice the Contractor shall be deemed to have been discharged from his obligation to complete the remaining unexecuted work under his contract. On receipt of such notice the Engineer shall proceed to complete the measurement and make such payment as may be finally due to the Contractor within a period of 90 days from the receipt of such notice in respect of the work already done by the Contractor. Such payment shall not in any manner prejudice the right of the Contractor to any further compensation under the remaining provisions of this clause.

(3) Where the Engineer requires the Contractor to suspend the work for a period in excess of 30 days at any time or 60 days in the aggregate the Contractor shall be entitled to apply to the Engineer within 30 days of the resumption of work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery rendered idle on the site or on account of his having had to pay the salary or wages of labour engaged by him during the said period of suspension, provided always that the contractor shall not be entitled to any claim in respect of any such working machinery, salary or wages for the first 30 days whether consecutive or in the aggregate of such suspension or in respect of any suspension whatsoever occasioned by unsatisfactory work or any other default on his part. The decision of the Engineer in this regard shall be final and conclusive against the Contractor.

(4) In the event of -

- i) Any total stoppage of work on notice from the Engineer under clause (1) in that behalf.
- ii) Withdrawal by the Contractor from the contractual obligations to complete the remaining unexecuted work under sub-clause (2) on account of continued suspension of work for a period exceeding 90 days.

OR

- iii) Curtailment in the quantity of item or items originally tendered on account of any alteration, omission or substitutions in the specifications drawing, designs, or instructions under clause 14(1) where such curtailment exceeds 25% in quantity and the value of the quantity curtailed beyond 25 percent at the rates for the item specified in the tender is more than Rs. 5,000/-.

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Desk-II dt.22-2-78.

It shall be open to the Contractor, within 90 days from the service of (i) the notice of stoppage of work or (ii) the notice of withdrawal from the contractual obligations under the contract on account of the continued suspension of work or (iii) notice under clause 15(1) resulting in such curtailment, to produce to the Engineer satisfactory documentary evidence that he had purchased for agreed to purchase material for use in the contract work, before receipt by him of the notice of stoppage, suspension or curtailment and require the Government to take over on payment such material at the rates determined by the Engineer, provided, however such rates shall in no case exceeds the rates at which the same were acquired by the Contractor. The Government shall thereafter take over the material so offered, provided the quantities offered, are not in excess of the requirements of the unexecuted work as specified in the accepted tender and are of quality and specifications approved by the Engineer.

Clause 15(A):- The Contractor shall not be entitled to claim any compensation from Government for the loss suffered by him on account of delay by Government in the supply of materials entered in Schedule A where such delay in caused by –

- i) Difficulties relating to the supply of railway wagons
- ii) Force majeure.
- iii) Act of God.
- iv) Act of enemies of the State or any other reasonable cause beyond the control of Government.

In the case of such delay in the supply of materials, Government shall grant such extension of time for the completion of the works as shall appear to the Executive Engineer to be reasonable in accordance with the circumstances of the case. The decision of the Executive Engineer as to the extension of time shall be accepted as final by the Contractor.

Clause 16 :- Under no circumstances whatever shall the Contractor be entitled to any compensation from Government on any account unless the Contractor shall have submitted claim in writing to the Engineer-in-charge within one month of the case of such claim occurring.

Clause 17:- If at any time before the security deposit or any part thereof is refunded to the Contractor it shall

Time limit for unforeseen claims.

Action and compensation

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appear to the Engineer-in-charge or his subordinate in charge of the work, that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of inferior quality or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to the that Contracted for, or are otherwise not in accordance with the Contract, it shall be lawful for the Engineer-in-charge to intimate this fact in writing to the Contractor and then notwithstanding the fact that the work, materials or articles complained of may have been inadvertently passed, certified and paid for, the Contractor shall be bound forthwith to rectify, or remove and reconstruct the work so specified in whole or in part, as the case may be require or if so required shall remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in the written intimation aforesaid, the contractor shall be liable to pay compensation at the rate of one percent on the amount of the estimate for every day not exceeding 10 days during which the failure so continuous and in the case of any such failure the Engineer-in-charge may rectify or remove and re-execute the work or remove and replace the materials or articles complained of, as the case may be at the risk and expense in all respects of the Contractor. Should the Engineer-in-charge consider that any such inferior work or materials as described above may be accepted or made use of it shall be within his discretion to accept the same at such reduce rates as he may fix there for.

Clause 18 :- All works under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer-in-charge and his subordinates, and the Contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge and his subordinates to visit the work shall have been given to the contractor, either himself be present to receive orders and instructions , or have a responsible agent duly accredited in writing present for that purpose. Orders given to the Contractors duly authorized agent shall be considered to have the same force and effect as if they had been given to the Contractor himself.

Clause 19 :- The Contractor shall give not less than

payable in case of bad work.

***P.W.D. Resolution
No. CAT-1087/
CR-94/
Bldg.2 dt.14-6-
89.***

Work's to be opened to inspection.

Contractor or responsible agent to be present.

Notice to be

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

***given before
work is
covered up.***

Clause 20:- If during the period of 12 **(Twelve) months** from the date of completion as certified by the Engineer-in-charge pursuant to clause-7 of the contract or in the opinion of the Executive Engineer the said work is defective in any manner whatsoever, the Contractor shall forthwith on receipt of notice in that behalf from the Executive Engineer, duly commence execution and completely carry out at his cost in every respect all the work that may be necessary for rectifying and setting right the defects specified therein including dismantling and reconstruction of unsafe portions strictly in accordance with and in the manner prescribed and under the supervision of the Executive Engineer. In the event of the Contractor failing or neglecting to commence execution of the said rectification work within the period prescribed there for in the said notice and /or to complete the same as aforesaid as required by the said notice, the Executive Engineer may get the same executed and carried out departmentally or by any other agency at the risk, on account and at the cost of the Contractor. The Contractor shall forthwith on demand pay to the Government the amount of such cost, charges and expenses sustained or incurred by the Government of which the certificate of the Executive Engineer shall be final and binding on the Contractor. Such costs, charges and expenses shall be deemed to be arrears of land revenue and in the event of the Contractor failing or neglecting to pay the same on demand as aforesaid without prejudice to any other rights and remedies of the Government, the same may be recovered from the contractor as arrears of land revenue. The Government shall also be entitled to deduct the same from any amount which may then be payable or which

***Contractor liable for
damage done, and
for imperfections.***

***P.W.D. Resolution
No.CAT-1087/CR-
94/Bldg.2.dt.14-6-
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may thereafter become payable by the Government to the contractor either in respect of the said work or any other work whatsoever or from the amount of security deposit retained by Government.

Clause 21:- The Contractor shall supply at his own cost all material (except such special materials, if any as may, in accordance with the contract, be supplied from the P.W. Departmental stores), plant, tools appliances, implements, ladders, cordage, tackles, scaffolding and temporary works requisite or proper for the proper execution of the work, whether in the original, altered or substituted form, and whether included in the specification or other documents forming part of the contract or referred to in these conditions or not and which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with the carriage there for to and from the work. The Contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works and counting, weighing and assisting in the measurement or examination at any time and from time to time of the work or the materials, failing which the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted from any money due to the Contractor under the contract or from his security deposit or the proceeds of sale thereof, or of sufficient portion thereof. The Contractor shall provide all necessary fencing and lights required to protect the public from accident, and shall also be bound to bear the expenses of defense of every suit, action or other legal proceeding, 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 proceedings to any such person, or which may with the consent of the Contractor be paid for compromising any claim by any such person.

***Contractor to supply
plant, ladders
scaffoldings,
etc.***

***And is liable for
damages arising
from non provisions
of lights, fencing etc.***

Clause 21(A):- The Contractor shall provide suitable scaffolds and working platforms, gangways and stairways and shall comply with the following regulations in connection therewith –

- a) Suitable scaffolds shall be provided for workmen for all works that cannot be safely done from a ladder or by other means.

- b)** A scaffold shall not be constructed, taken down or substantially altered except.
- i) under the supervision of a competent and responsible person; and
 - ii) as far as possible by competent workers possessing adequate experience in this kind of work.
- c)** All scaffolds and appliances connected therewith and all ladders shall -
- i) be of sound material.
 - ii) be of adequate strength having regard to the loads and strains to which they will be subjected, and
 - iii) be maintained in proper condition.
- d)** Scaffolds shall be so constructed that no part thereof can be displaced in consequence of normal use.
- e)** Scaffold shall not be over-loaded and so far as practicable the load shall be evenly distributed.
- f)** Before installing lifting gear on scaffolds special precautions shall be taken to ensure the strength and stability of the scaffolds.
- g)** Scaffolds shall be periodically inspected by a competent person.
- h)** Before allowing a scaffold to be used by his workmen the Contractor shall whether the scaffold has been erected by his workmen or not, take steps to ensure that it complies fully with the regulations herein specified.
- i)** Working platform, gangway, stairways shall -
- i)** be so constructed that no part thereof can sag unduly on unequally.
 - ii)** be so constructed and maintained, having regard to the prevailing conditions as to reduce as far as practicable risks of persons tripping or slipping and
 - iii)** be kept free from any unnecessary obstruction
- j)** In the case of working platform, gangways,

working places and stairways at a height exceeding 3.00 meters,

- i) every working platform and every gangway shall be closely boarded unless other adequate measures are taken to ensure safety,
 - ii) every working platform and gangway shall have adequate width; and
 - iii) every working platform and gangway, working place and stairway shall be suitable fenced.
- k)** Every opening in the floor of a building or in a working platform shall expect for the time and to the extent require to allow the excess of persons or the transport or shifting of material be provided be suitable means to prevent the fall of persons or material.
- l)** When persons are employed on a roof where there is a danger of falling from a height exceeding 3.00 metres (to be specified) suitable precautions shall be taken to prevent the fall of persons or materials.
- m)** Suitable precautions shall be taken to prevent persons being struck by articles, which might fall from scaffolds or other working places.
- n)** Safe means of access shall be provided to all working platforms and other working places.
- o)** The Contractor/(s) will have to make payments to labourers as per Minimum Wages Act.

Clause 21(B):- The Contractor shall comply with the following regulations as regards the Hoisting Appliances to be used by him :-

- a)** Hoisting machines and tackles, including their attachments, anchorages and supports shall.
 - i)** be of good mechanical construction, sound material and adequate strength and free from patent defect;
 - and**
 - ii)** be kept in good repair and in good working order.
- b)** Every rope used in hoisting or lowering materials or as a means of suspension shall be of

suitable quality and adequate strength and free from patent defect.

- c) Hoisting machines and tackles shall be examine and adequately tested after erection on the site and before use and be re-examined in position at intervals to be prescribed by the Government.
- d) Every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering materials or as a means of suspension shall be periodically examined.
- e) Every crane driver or hoisting appliance operator shall be properly qualified.
- f) No person who is below the age of 18 years shall be in control of any hoisting machine, including any scaffold, or give signals to the operator.
- g) In case of every hoisting machine and of every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering or as a means of suspension, the safe working load shall be ascertained by adequate means.
- h) Every hoisting machine and all gear referred to in preceding regulation shall be plainly marked with the safe working load.
- i) In the case of a hoisting machine having a variable safe working load each safe working load and the conditions under which it is applicable shall be clearly indicated.
- j) No part of any hoisting machine or any gear referred to in regulation (h) above shall be loaded beyond the safe working load except for the purpose of testing.
- k) Motors, gearing transmissions, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards.

Clause 22:- The Contractor shall not set fire to any standing jungle, trees, brushwood or grass without a written permit from the Executive Engineer. When such permit is given, and also in all cases when destroying, cut or dug up trees, brushwood, grass etc. by fire, the Contractor shall take necessary measures to prevent such fire spreading to or otherwise damaging surrounding property.

The Contractor shall make his own arrangements for drinking water for the labour employed by him and provide sanitary and other arrangements.

Measure for prevention of fire.

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Clause 23:- Compensation for all damages done intentionally or unintentionally by Contractors labour whether in or beyond the limits of the Government property including any damage caused by the spreading of fire mentioned in Clause 22 shall be estimated by the Engineer-in-charge subject to the decision of the Superintending Engineer on appeal shall be final and the Contractor shall be bound to pay the amount of the assessed compensation on demand, failing which the same will be recovered from the Contractor as damage in the manner prescribed in Clause 1 or deducted by the Engineer-in-charge from any sums that may be due or become due from Government to Contractor under this contract or otherwise.

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

Clause 24:- The employment of female labours on works in neighborhood of soldiers barracks should be avoided as far as possible.

Clause 25:- No work shall be done on a Sunday without the sanction in writing of the Engineer-in-charge.

Clause 26:- The contract shall not be assigned or sublet without the written approval of the Engineer-in-charge. And if the Contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any proceedings to get himself adjudicated and insolvent or make any composition with his creditors, or attempt so to do or if bribe, gratuity, gift loan, perquisite, reward or advantage, pecuniary or otherwise shall either directly or indirectly be given, promised or offered by the Contractor or any of his servants or agents to any public officer or person in the employ of Government in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-charge may thereupon by notice in writing rescind the contract, and the security deposit of the Contractor shall thereupon stand forfeited and be absolutely at the disposal of Government, and the same consequences shall ensure as if the contract had been rescinded under Clause 3 thereof and in addition the Contractor shall not be entitled to recover or be paid for any work therefore actually performed under the contract.

Clause 27:- All sums payable by a Contractor by way

Liability of contractor for any damage done in or outside work area.

Employment of female labour

Work on Sunday

Work not to be sublet

Contract may be rescinded and security deposit forfeited for subletting it without approval or for bribing a public officer or if contractor becomes insolvent.

Sum payable by way

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of compensation under any of these conditions shall be considered as a reasonable compensation to be applied to the use of Government without reference to the actual loss or damages sustained, and whether any damage has or has not been sustained.

Clause 28:- In the case of tender by partners, any change in the constitution of a firm shall be forthwith notified by the Contractor to the Engineer-in-charge for his information.

Clause 29:- All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Superintending Engineer of the Circle, for the time being, who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

Clause 30(1):- Except where otherwise specified in the contract and subject to the powers delegated to him by Government under the code, rules then in the force, the decision of the Superintending Engineer of the Circle for the time being shall be final, conclusive and binding on all parties of the contract upon all questions relating to the meaning of the specifications, designs, drawings and instruction hereinbefore mentioned and as to the quality of workmanship or materials used on the work, or as to any other question, claim right, matter or things whatsoever, if any way arising out of, or relating to the contract, designs, drawings, specifications, estimates, instructions, orders, or other conditions, or otherwise concerning the works, or the execution, or failure to execute the same, whether arising during the progress of the work, or after the completion or abandonment thereof.

Clause 30 (2):- The Contractor may within thirty days of receipt by him of any order passed by the Superintending Engineer of the Circle as aforesaid appeal against it to the Chief Engineer, concerned with the contract work or project provided that -

- (a) The accepted value of the contract exceeds Rs.10 lakhs (Rupees Ten lakhs)
- (b) Amount of claim is not less than Rs.1.00 Lakh(Rupees One Lakh).

Clause 30 (3):- If the Contractor is not satisfied with the order passed by the Chief Engineer as aforesaid, the

of compensation to be considered as reasonable compensation without reference to actual loss. Change in the constitution of firm to be notified.

Direction and control of the Superintending Engineer.

Direction and control of the Superintending Engineer

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Contractor may, within thirty days of receipt by him of any such order appeal against it to the concerned Secretary, Public Works Department/ Irrigation Department who, if convinced that Prima-facie the Contractors claim rejected by Superintending Engineer/Chief Engineer is not frivolous and that there is some substance in the claim of the Contractor as would merit a detailed examination and decision by the Standing Committee, shall put up to the Standing Committee at Government level for suitable decision (Vide PW Circular No. CAT-1086-CR-110/Bldg.2 Dated 7.5.1986)

Clause 31 :- The Contractor shall obtain from the P.W. Departmental stores all stores and articles of European or American manufacture which may be required for the work, or any part thereof or in making up any articles required thereof in connection therewith unless he has obtained permission in writing from the Engineer-in-charge to obtained such stores and articles elsewhere. The value of such stores and articles as may be supplied to the Contractor by the Engineer-in-charge will be debited to the Contractor in his account at the rate shown in the said schedule in from 'A' attached to the Contract and if they are not entered in the schedule, they shall be debited to him at cost price which for the purpose of this Contract shall include the cost of carriage and all other expenses whatsoever, which shall have been incurred in obtaining delivery of the same at the stores aforesaid.

Stores of European or American manufacture to be obtained from Government

Clause 32:- When the estimate on which a tender is made includes lump sums in respect of part of the work, the Contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as payable under this Contract for each items, or if the parts of the work in question is not in the opinion of the Engineer-in-charge capable of measurement, the Engineer-in-charge may at his discretion pay the lump sum amount entered in the estimate and the certificate in writing of the Engineer-in-charge shall be final and conclusive against the Contractor with regard to any sum or sums payable to him under the provisions of this clause.

Lump-sum in estimates.

Clause 33:- In the case of any class of work for which there is no such specification as is mentioned in Rule 1 of Form B-1 such work shall be carried out in accordance with the Divisional specifications, and in the event of there being no Divisional specification, then in such case the work shall be carried out in all respects in accordance with all instructions and

Action where no specifications.

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requirements of the Engineer-in-charge

Clause 34:- The expression "Work" or "Works" where used in these conditions, shall unless there be something in the subject or context repugnant to such construction, be constructed to mean the work or works contracted to be executed under or in virtue of the contract, whether temporary or permanent and whether original, altered, substituted or additional.

Clause 35:- The percentage referred to in the tender shall be deducted from/added to the gross amount of the bill before deducting the value of any stock issued

Clause 36:- All quarry fees, royalties dues and ground rent for stacking materials, if any, should be paid by the contractor. **If the royalty paid challans in government account is not submitted by the contractor, amount of royalty due shall be recovered from contractor's bill at prevailing rate.**

Clause 37:- The Contractor shall be responsible for and shall pay any compensation to his workmen payable under the Workmen's Compensation Act.1923 (VIII of 1923), (hereinafter call the said Act) for injuries caused to the workmen. If such compensation is payable/ paid by the Government as principal under sub-section (1) of Section 12 of the said Act on behalf of the Contractor, it shall be recoverable by the Government from the Contractor under sub-section (2) of the said section. Such Compensation shall be recovered in the manner laid down in Clause 1 above.

Clause 37 (A):- The Contractor shall be responsible for and shall pay the expenses of providing medical aid to any workmen who may suffer a bodily injury as a result of an accident. If such expenses are incurred by Government the same shall be recoverable from the Contractor forthwith and be deducted without prejudice to any other remedy of the Government from any amount due or that may become due to the Contractor.

Clause 37(B):- The Contractor shall provide all necessary personal safety equipment and first aid apparatus available for the use of the persons employed on the site and shall maintain the same in condition suitable for immediate use at any time and shall comply with the following regulations in connection therewith :-

a) The workers shall be required to use the equipments so provided by the Contractor and the Contractor shall take adequate steps to ensure proper use of the equipment by those concerned.

b) When work is carried on in proximity to any place

Definition of work.

Contractor's percentage whether applied to net or gross amount of bill.

Quarry fees and royalties.

Compensation under workmen's Compensation Act.

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where there is a risk of drowning all necessary equipment shall be provided and kept ready for use and all necessary steps shall be taken for the prompt rescue of any person in danger.

c) Adequate provision shall be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

Clause 37(C):- The Contractor shall duly comply with the provisions of "The Apprentices Act. 1961" (III of 1961) the rules made thereunder and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so he shall be subjected to all the liabilities and penalties provided by the said Act and said Rules. (Govt. Circular No. CAT-6076/3336/(400)/Bldg.2 dt. 16-8-1985.)

Clause 38:- (1) Quantities shown in the tender are approximate and no claim shall be entertained for quantities of work executed being either more or less than those entered in the tender or estimate.

(2) Quantities in respect of the several items shown in the tender are approximate and no revision in the tendered rates shall be permitted in respect of any of the items so long as, subject to any special provision contained in the specifications prescribing a different percentage of permissible variation in the quantity of the item does not exceed the tender quantity by more than 25 percent and so long as the value of the excess quantity beyond this limit at the rate of the items specified in the tender, is not more than Rs.5,000/-

(3) The contractor shall if ordered in writing by the **Engineer** so to do, also carry out any quantities in excess of the limit mentioned in sub-clause (i) hereof on the same conditions as and in accordance with the specifications in the tender and at the rates (i) derived from the rates entered in the current schedule of rates and in the absence of such rates (ii) at the rates prevailing in the market. The said rates increased or decreased as the case may be, by the percentage which the total tendered amount bears to the estimated cost of the work as put to tender based upon the schedule of rates applicable to the year in which the tenders were accepted **(For the purpose of operation of this clause, this cost shall be as worked out from D.S.R. prevailing at the time of acceptance of tender.)**

(4) Claims arising out of reduction in the tendered quantity of any item beyond 25 percent will be governed by the provision of clause 15 only when the amount of

Claim for quantities of work entered in the tender or estimates.

such reduction beyond 25 percent at the rate of the item specified in the tender is more than Rs.5,000/- (This clause is not applicable to extra items)

Clause 39:- The Contractor shall employ any famine, convict or other labour of a particular kind or class if ordered in writing to do so by the Engineer-in-charge.

***Employment of
famine labour
etc.***

Clause 40:- No compensation shall be allowed for any delay caused in the starting of the work on account of acquisition of land or, in the case of clearance works, on account of any delay in according sanction to estimates.

***Claim for
compensation for
delay in starting of
work.***

Clause 41:- No compensation shall be allowed for any delay in the execution of the work on account of water, standing in borrow pits or compartments. The rates are inclusive for hard or cracked soil, excavation in mud, sub-soil water or water standing in borrow pits and no claim for an extra rate shall be entertained unless otherwise expressly specified.

***Claim for
compensation for
delay in execution of
work.***

Clause 42:- The Contractor shall not enter upon or commence any portion of work except with written authority and instructions of the Engineer-in-charge or his subordinate in charge of the work. Failing such authority the Contractor shall have no claim to ask for measurements of the payment for work.

***Entering upon
or commencing
any portion of
work.***

Clause 43(i):- No contractor shall employ any person who is under the age of 18 years.

***Minimum age of
persons employed, the
employment of
donkeys and / or
other animals and the
payment of fair
wages.***

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

(iii) No animal suffering from sores, lameness or emaciation or which is immature shall be employed on the work.

(iv) The Engineer-in-charge or his Agent is authorized to remove from the work, any person or animal found working which does not satisfy these conditions and no responsibility shall be accepted by Government for any delay caused in the completion of the work by such removal.

(v) The contractor shall pay fair and reasonable wages to the workmen employed by him, in the contract undertaken by him. In the event of any dispute arising between the contractor and his workmen on the grounds that the wages paid are not fair and reasonable, the dispute shall be referred without delay to the Executive Engineer shall be conclusive and binding on the contractor but such decision shall not in any way affect the conditions in the contract regarding the payment to be made by Government at

the sanctioned tender rates.

(vi) Contractor shall provide drinking water facilities to the workers. Similar amenities shall be provided to the workers engaged on large work in urban areas.

(vii) All facilities provided in the contract labour (Regulation and Abolition Act 1971), The Maharashtra Contract Labour Regulation and Abolition Rule 1971 should be provided.

Clause 44:- Payment to contractors shall be made by cheque drawn on any treasury within the division convenient to them, provided the amount exceeds Rs.10. Amounts not exceeding Rs.10 will be paid in cash.

Method of payment.

Clause 45:- Any contractor who does not accept these conditions shall not be allowed to tender for works.

Acceptance of conditions compulsory before tendering for work

Clause 46 :- If Government declares a state of scarcity of famine to exist in any village situated within 10 miles of the work the Contractor

shall employ upon such parts of the work, as are suitable for unskilled labour, any person certified to him by the Executive Engineer, or by any person to whom the Executive Engineer may have delegated this duty in writing to be in need of relief and shall be bound to pay to such person wages not below the minimum which Government may have fixed in this behalf. Any disputes which may arise in connection with the implementation of this clause shall be decided by the Executive Engineer whose decision shall be final and binding on the Contractor.

Clause 47 :- The price quoted by the contractors shall Not in any case exceed the control price, if any, fixed by Government or reasonable price which it is permissible for him to charge a private purchaser for the same class and description, the controlled price or price permissible under Hoarding and Profiteering Prevention Ordinances, 1948, as amended from time to time. If the price quoted exceeds the controlled price or the price permissible under Hording and Profiteering Prevention Ordinance, the contractor will specifically mention this fact in his tender along with the reasons for quoting such higher price. The purchaser at his discretion will in such case exercise the right of revising the price at any stage so as to conform with the controlled price as permissible under the Hoarding and Profiteering Prevention

Ordinance. This discretion will be exercised without prejudice to any other action that may be taken against the contractor As per Government of Maharashtra finance department Marathi circular No./GST/2017/CR.81/karadhan-1, Mantralay Mumbai dated 19/8/2017. Bidder shall quote his offer considering the provision covered under GST act-2017.

Clause 48 :- The rates to be quoted by the contractor must be excluding of all taxes such as Royalty/GST etc. No extra payment on this account will be made to the contractor.

Clause 48 A - GST act 2017 GST Act 2017:-

A) Registration & GST Rates-

- 1) Bidder should indicate GSTIN No. (Copy of GST registration to be enclosed) and PAN No. (Copy of PAN to be enclosed).
- 2) Tender will be considered / accepted, if & only if the bidder has a valid GST Registration No.
- 3) The rates to be quoted by the Contractor / Bidder must be excluding GST but inclusive of all other applicable taxes and duties that the Bidder will have to pay for performance of this Contract.

B) Invoicing & Payment

- 1) The Tax Invoice for supply of Goods & Services should be raised as per the provision of GST Act & Rules and must compulsorily mention the Departments and Bidder GSTIN No., Description of Goods or Services, Taxable value, Tax Rate, Amount of Tax etc.
- 2) Reimbursement of GST to the bidder is contingent upon complying with the following condition by the service provider. a. Uploading the onward GST Return in GSTN Network portal within statutory time period. b. Discharging the GST tax liability to the Govt. c. Submission of Tax Invoice to department. d. Submission of proof of payment of GST to department. e. Availment of Input Tax Credit by department.
- 3) GST will be paid by the employer / department on the accepted contract value at the rates applicable to the works contract to the Bidder. The employer / department will perform such duties in regard to the deduction of other taxes and charges at source as per applicable law.
- 4) The Bidder shall be responsible for deposition of applicable GST to the concerned authority. Extra payment towards GST will be reimbursed by the department on account of GST after due verification and

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subject to submission of documentary evidence by Engineer in Charge.

Clause 49 :- In case of materials that may remain surplus with the Contractor from those issued for the work contracted for, the date of ascertainment of the materials being surplus will be taken as the date of sale for the purpose of sales tax and the sales tax will be recovered on such sale.

Clause 50 :- The Contractor shall employ the unskilled labour to be employed by him on the said work only from locally available labour and shall give preference to those persons enrolled under Maharashtra Government Employment and Self Employment Department's Scheme.

Employment of scarcity labour.

Provided, however, that if the required unskilled labours from that district is are not available locally, the Contractor shall in the first instance employ such number of persons as is available and thereafter may with previous permission, in writing of the Executive Engineer-in-charge of the said work, obtain the rest of requirement of unskilled the labour from outside the above scheme.

Clause 51:- The contractor shall pay the labourers (skilled and unskilled) according to the wages prescribed by the Minimum Wages Act of 1948 applicable to the area in which the work of the contract is located. The contractor shall comply with the provision of the Apprentices Act, 1961, and the rules and orders issued thereunder from time to time, if he fails to do so his failure will be a breach of the contract and the Superintending Engineer, may in his discretion may cancel the contract. The Contractor shall also be liable, for any precautionary liability, arising on account of any violation by him of the provision of Act. The contractor shall pay labourers skilled and unskilled according to the wages prescribed by the Minimum Wages Act, of 1948 applicable to the area in which work lies.

The contractor to take precautions against accidents which take place on account of labour using loose garments while working machinery.

Clause 52:- All amounts whatsoever which the contractor is liable to pay to the Government in connection with the execution of the work including the amount payable in respect of (i) materials and / or stores supplied/ issued hereunder by the Government

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to the contractor. (ii) hire charges in respect of heavy plant, machinery and equipment given on hire, by the Government to the contractor for execution by him of the work and/or on which advances have been given by the Government to the contractor shall be deemed to be arrears of Land Revenue and the Government may without prejudice to any other rights and remedies of the Government recover the same from the contractor as arrears of land revenue.

(CAT-1274/40364/Desk-2 dt. 7-12-76)

Clause 53:- The Contractor shall duly comply with all the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 (37 of 1970) and the Maharashtra Contract Labour (Regulation and Abolition) Rules, 1971 as amended from time to time and all other relevant statutes and statutory provisions concerning payment of wages particularly to workmen employed by the Contractor and working on the site of the work. In particular the Contractor shall pay wages to each worker employed by him on the site of the work at the rates prescribed under the Maharashtra Contract Labour (Regulation and Abolition) Rules, 1971. If the Contractor fails or neglects to pay wages at the said rates or makes short payment and the Government makes such payment of wages in full or part thereof less paid by the Contractor as the case may be the amount so paid by the Government to such workers shall be deemed to be an arrears of land revenue and the Government shall be entitled to recover the same as such from the contractor or deduct the same from the amount payable by the Government to the Contractor hereunder or from any other amount/s payable to him by the Government.

Clause 54:- The contractor shall engage apprentice such as brick layer, carpenter, wiremen, plumber, as well as blacksmith by recommended by the State Apprenticeship Advisor Director of Technical Education, Dhobi Talaw, Mumbai :400 001. In the construction work (as per Government of Maharashtra, Education Government No.TSA/5170/T5689, dtd.7.7.1972).

Clause 55 :- (Government of Maharashtra P.W.D. Resolution No.CAT/1086/CR-243/K/Bldg.32 Dated. 11.8.1987)

- A. The anti malaria and other health measures shall be as directed by the joint Director (Malaria and Filaria) of Health Service, Pune.
- B. Contractor shall see that mosquitoenic conditions

**Government Circular
No. CAT-1284/(120)
/Bldg.2 dt. 14.8.85**

**Conditions for
malaria eradication
anti malaria and
other health
measures**

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are not created so as to keep vector population to minimum level.

- C.** Contractor shall carry out anti-malaria measures in the area as per guidelines prescribed under National Malaria Eradication Programme and as directed by the Joint Director (M & F) of Health Services, Pune.
- D.** In case of default in carrying out prescribed anti-malaria measures resulting in increase in malaria incidence, contractor shall be liable to pay to Corporation the amount spent by Government on anti malaria measures to control the situation in addition to fine.

E. RELATIONS WITH PUBLIC AUTHORITIES:

The Contractor shall make sufficient arrangements for draining away the sewage water as well as water coming from the bathing and washing places and shall dispose off this water in such a way as not to cause any nuisance. He shall also keep the premises clean by employing sufficient number of sweepers. The Contractor shall comply with all rules, regulations, bye-laws and directions given from time to time by any local or public authority in connection with this work and shall pay fees or charges which are leviable on him without any extra cost of Government.

Clause 56: CONDITIONS RELATING TO INSURANCE OF CONTRACT WORK

The Contractor shall take out necessary Insurance Policy / Policies (viz. Contractor's All Risks Insurance Policy, Erection All Risks Insurance Policy etc. as decided by the Directorate of Insurance) so as to provide adequate insurance cover for execution of the awarded contract work for total contract value and complete contract period

COMPULSORILY from the " Directorate of Insurance, Maharashtra State, Mumbai" only. Its postal address for Correspondence is " 264, MHADA, First Floor, Opposite Kalanagar, Bandra (East), Mumbai- 400051." (Telephone Nos. 022- 265 90 403 / 265 90 690 and Fax No. is 022- 265 92 461 / 265 90 690). Similarly all workmen's appointed to complete the contract work are required to insure under workmen's compensation Insurance Policy. Insurance Policy / Policies taken out from any other company will not be accepted. If any Contractor has not taken out the insurance policy from the "Directorate of Insurance, Maharashtra State, Mumbai" or has effected Insurance with any Insurance Company, the same will not be accepted and 1% of the tender amount or such amount

of premium calculated by the Government Insurance Fund will be recovered directly from the amount payable to the Contractor for the executed contract work and paid to the Directorate of Insurance Fund, Maharashtra State, Mumbai. The Director of Insurance reserves the right to distribute the risks of insurance among the other insurers.

Clause57:-Building and Other Construction Workers Welfare Cess

As per Government of Maharashtra, Industry, Energy & Labour Deptt. G.R. No. BLA 2009/ Pra.Kra.108 / Kamgar-7A, dt 17/6/2010 & Public Works Department Circular No. BDG-2010/ Pra.kra. 277 / Building-2, dated 28/09/2010, Building and Other Construction Workers Welfare Cess at one percent or at the rates amended from time to time as intimated by the competent authority under Building and Other Constructions Worker Welfare Act 1996 will be deducted from the Bill amount, whether measured Bill, advance payment or Secured Advance.

Clause: - 58. GST (Goods and Service Tax)

Government of India as made applicable Goods and Service Tax act w.e.f. 01/07/2017. Accordingly work contract have been brought under preview of the GST act 2017. The tender rate are as per PWD SSR 2020-21. The bidder shall study the structure of GST and quote his offer accordingly. No extra payment shall be paid against GST.

As per 22/05/2018 WRD GST will be paid at the time of payment of bill on production of GST Tax invoice with bill, it should be certified by a Chartered accountant. GST also will paid at prevailing rates at the time of payment as per concern department circular.

The section 51 of the CGST and MGST Act provides that every department or establishment of the Central Government or the State Government to deduct tax at source (TDS) at the rate of 1% each for MGST and CGST from the payment made to the deductee. Thus total value of deduction would be 2% or as per guidelines of the concerned department at the time of payment.

Note:- In case of interstate supply TDS is 2% under IGST TDS certificate in this regard will be issued to the deductee within 5 days of crediting the amount to the Government.

**Government in
P.W.Deptt. letter (in
Marathi)No. Misc /
10 1091
Pra.Kra.2771
BWg.-2, Mantralaya,
Mumbai - 32 dated
17/08/2010**

**~~ACCOMPANIMENT TO THE GOVERNMENT RESOLUTION PUBLIC
WORKS DEPARTMENT
NO.CAT/06/04/148 DATED 16.05.2005~~**

PRICE VARIATION CLAUSE

~~If during the Operative Period of the Contract as defined in condition (i) below, there shall be any variation in the Consumer Price Index (New Series) for Industrial Workers for Mumbai Centre as per the Labour Gazette published by the Commissioner of Labour, Government of Maharashtra and / or in the whole sale Price Index for all commodities prepared by the Office of Economic Adviser, Ministry of Industry, Government of India or in the price of Petrol / Oil and Lubricants and major construction materials like bitumen, cement, TMT Bar etc., then subject to the other conditions mentioned below, price adjustment on account of~~

- ~~(1) Labour Component~~
- ~~(2) Material Component~~
- ~~(3) Petrol, Oil and Lubricants Component~~
- ~~(4) Bitumen Component~~
- ~~(5) TMT Bar Component~~
- ~~(6) Cement Component~~

~~Calculated as per the formula hereinafter appearing, shall be made. Apart from these, no other adjustments shall be made to the contract price for any reasons whatsoever. Component percentage as given below are as of the total cost of work put to tender. Total of Labour, Material & POL components shall be 100 and other components shall be as per actual.~~

(1) Labour Component — K₁	÷	32%
(2) Material Component — K₂	÷	55%
(3) POL Component — K₃	÷	13%
(4) Bitumen Component	÷	Actual
(5) TMT Bar Component	÷	Actual
(6) Cement Component	÷	Actual

~~**Note:** If Cement, TMT Bar, Bitumen are supplied on Schedule 'A', then respective component shall not be considered. Also if particular component is not relevant same shall be deleted.~~

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~~A) FORMULA FOR LABOUR COMPONENT:~~

$$V_1 = \frac{0.85}{P} \times \frac{K_1}{100} \times \frac{L_1 - L_0}{L_0}$$

Where,

- V₁** = ~~Amount of price variation in Rupees to be allowed for Labour component~~
- P** = ~~Cost of work done during the quarter under consideration minus the cost of Cement, TMT Bar, Bitumen calculated at the basic star rates as applicable for the tender, consumed during the quarter under consideration.~~
- K₁** = ~~Percentage of Labour Component as indicated above.~~
- L₁** = ~~Average Consumer Price Index for Mumbai centre for the quarter under consideration.~~
- L₀** = ~~Basic Consumer Price Index for Mumbai centre shall be average consumer price index for the quarter preceding the month in which the last date prescribed for receipt of tender falls.~~

~~B) FORMULA FOR MATERIALS COMPONENT:~~

$$V_2 = \frac{0.85}{P} \times \frac{K_2}{100} \times \frac{M_1 - M_0}{M_0}$$

Where,

- V₂** = ~~Amount of price variation in Rupees to be allowed for Materials component~~
- P** = ~~Cost of work done during the quarter under consideration minus the cost of Cement, TMT Bar, Bitumen calculated at the basic star rates as applicable for the tender, consumed during the quarter under consideration.~~
- K₂** = ~~Percentage of Materials Component as indicated above.~~
- M₁** = ~~Average wholesale Price Index during the quarter under consideration.~~
- M₀** = ~~Basic wholesale Price Index shall be average wholesale price index for the quarter preceding the month in which the last date prescribed for receipt of tender falls.~~

~~(C) FORMULA FOR PETROL, OIL AND LUBRICANT COMPONENT:~~

$$V_3 = \frac{0.85}{P} \times \frac{K_3}{100} \times \frac{P_1 - P_0}{P_0}$$

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Where,

- ~~V₃ = Amount of price variation in Rupees to be allowed for POL component~~
- ~~P = Cost of work done during the quarter under consideration minus the cost of Cement, TMT Bar, Bitumen calculated at the basic star rates as applicable for the tender, consumed during the quarter under consideration.~~
- ~~K₃ = Percentage of Petrol, Oil & Lubricant Component~~
- ~~P₁ = Average price of H.S.D. at Mumbai during the quarter under consideration.~~
- ~~P₀ = Average price of H.S.D. at Mumbai during the quarter preceding the month in which the last date prescribed for receipt of tender falls.~~

~~(D) **FORMULA FOR BITUMEN COMPONENT:**~~

$$\del V_4 = QB \times B_1 - B_0$$

~~**Where,**~~

- ~~V₄ = Amount of price variation in Rupees to be allowed for Bitumen component.~~
- ~~QB = Quantity of bitumen (Grade 30/40 & 60/70) in metric tones used in the permanent works and approved enabling works during the quarter under consideration.~~
- ~~B₁ = Current, average ex refinery price per metric tonne of Bitumen (Grade 30/40 & Grade 60/40) under consideration including taxes (octroi, excise, sales tax) during the quarter under consideration.~~
- ~~B₀ = Basic rate of Bitumen in rupees per metric tonne as considered for working out value of P. or average ex refinery price in rupees per metric tonne including taxes (octroi, excise sales tax) of bitumen for the grade of bitumen under consideration prevailing quarter preceding the month in which the last date prescribe for receipt of tender, falls, whichever is higher.~~

~~(E) **FORMULA FOR TMT BAR COMPONENT:**~~

$$\del V_5 = \frac{S_0(SI_1 - SI_0)}{SI_0} \times T$$

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Where,

~~V_5 = Amount of price variation in Rupees to be allowed for TMT Bar component~~

~~S_0 = Basic rate of TMT Bar in rupees per metric tonne as considered for working out value of P.~~

~~SI_1 = Average Steel Index as per RBI Bulletin during the quarter under consideration.~~

~~SI_0 = Average of Steel Index as per RBI Bulletin for the quarter preceding the month in which the last date prescribed for receipt of tender falls.~~

~~T = Tonnage of TMT Bar used in the permanent works for the quarter under consideration.~~

~~(F) FORMULA FOR CEMENT COMPONENT :-~~

$$V_6 = \frac{C_0(CI_1 - CI_0)}{CI_0} \times T$$

Where,

~~V_6 = Amount of price escalation in Rupees to be allowed for Cement component.~~

~~C_0 = Basic rate of cement in rupees per metric tonne as considered for working out value of P.~~

~~CI_1 = Average of cement Index published in the RBI Bulletin for the quarter under consideration.~~

~~CI_0 = Average of cement Index published in the RBI Bulletin for the quarter preceding the month in which the last date prescribed for receipt of tender falls.~~

~~T = Tonnage of cement used in the permanent works for the quarter under consideration.~~

The following conditions shall prevail:

- ~~i. The operative period of the Contract shall mean the period commencing from the date of the work order issued to the Contractor and ending on the date on which the time allowed for completion of the works specified in the Contract for work expires, taking into consideration the extension of time, if any, for~~

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~~completion of the work granted by Engineer under the relevant clause of the Conditions of Contract in cases other than those where such extension is necessitated on account of default of the Contractor. The decision of the Engineer as regards the operative period of the Contract shall be final and binding on the Contractor. Where any compensation for liquidated damages is levied on the Contractor on account of delay in completion or inadequate progress under the relevant Contract provisions, the price adjustment amount for the balance work from the date of levy of such compensation shall be worked out by pegging the indices L_1 , M_1 , C_1 , P_1 , B_1/S_1 and Cl_1 to the levels corresponding to the date from which such compensation is levied.~~

~~ii. This price variation clause shall be applicable to all contracts in B1/B2 & C form but shall not apply for piece works. The price variation shall be determine during each quarter as per formula given above in this clause.~~

~~iii. The price variation under the clause shall not be payable for the extra items required to be executed during the completion of the work and also on the excess quantities of items payable under the provisions Clause 38/37 of the contract from B1/B2 respectively. Since the rates payable for the extra items or the extra quantities under Clause 38/37 are to be fixed as per the current DSR or as mutually agreed to yearly revision till completion of such work. In other words, when the completion / execution of extra items as well as extra quantities under Clause 38/37 of the contract from B1/B2 extends beyond the operative date of the DSR then rates payable for the same beyond the date shall be revised with reference to the current DSR prevalent at that time on year to year basis or revised in accordance with mutual agreement thereon, as provided for in the Contract, whichever is less.~~

~~iv. This Clause is operative in both ways, i.e. if the price variation as calculated above is on the plus side, payment on account of the price variation shall be allowed to the contractor and if it is on the negative side, the Government shall be entitled to recover the same from the Contractor and the amount shall be deductible from any amounts due and payable under the contract.~~

~~v. To the extent that full compensation for any rise or fall in costs to the Contractor is not entirely covered by the provision of this or other clauses in the contract, the unit rate and prices included in the contract shall be deemed to include amounts to cover the contingency of such other actual rise or fall in costs.~~

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ADDITIONAL GENERAL CONDITIONS

1. CONTRACTOR TO INFORM HIMSELF FULLY:

The contractor shall be deemed to have carefully examined the work and site conditions including labour, the general and the special conditions, specifications, schedules and drawings and shall be deemed to have visited the site of the work and to have fully informed himself regarding the local conditions and carried out his own investigation to arrive at rates quoted in the tender. In this regard, he will be given necessary information to the best of knowledge of Department but without any guarantee about it. If he shall have any doubt as to the meaning of any portions of these general conditions or the special conditions, or the scope of work or the specifications and drawings or any other matter concerning the contract, he shall in good time, before submitting his tender, set forth the particulars thereof and submit them to the **Executive Engineer, Thane Irrigation Division, Thane** in writing in order that such doubts may be clarified authoritatively before tendering. Once a tender is submitted, the matter will be decided according to tender conditions in the absence of such authentic pre-clarification.

2. INDEMNITY:

The contractor shall indemnify the Government against all actions, suits, claims and demands brought or made against him in respect of anything done or committed to be done by the contractor in execution of or in connection with the work of this contract and against any loss or damage to the Government in consequence of any action or suit being brought against the Contractor for anything done or committed to be done in the execution of the works of this contract.

3. DEFINITIONS:

Unless excluded by or repugnant to the context,

- (a) The expression "Government" as used in the tender papers shall mean the Public Works, Irrigation and Housing Department of the Government of Maharashtra.
- (b) The expression "Chief Engineer" as used anywhere in the tender papers shall mean Chief Engineer or the Government of Maharashtra who is designated as such.
- (c) The expression "Superintending Engineer" as used in the tender papers shall mean an officer of Super intending Engineer's rank (by whatever designation he may be known) under whose control the work lies for the time being,

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- (d) The expression "Engineer" or "Engineer-in-charge" as used in the tender *papers* shall mean the Executive Engineer in charge of the work for the time being.
- (e) The expression "Contractor" used in the tender papers shall mean the successful tenderer whose tender has been accepted, and who has been authorized to proceed with the work. The contractor shall / may be the individual or firm or company whether incorporated or not, undertaking the work and shall include legal representatives of such an individual or person comprising such firm or company as the case may be and permitted assigns of such individual or firm or company.
- (f) The expression "Contract" as used in tender papers shall mean the deed of contract together with its original accompaniment and those later incorporated in it by mutual consent.
The contract shall mean the notice offender the sealed quotation and the tender documents including the tender and acceptance thereof together with the documents referred to therein and the accepted conditions, specifications, designs, drawings, priced schedule / bill of quantities and schedule of rates. All these documents taken together shall be deemed to form one contract and shall be complementary to one other.
- (g) The expression "Plant" as used in the tender papers shall mean every machinery, necessary or considered necessary by the Engineer to execute, construct, complete and maintain the works and used in. altered, modified, substituted and additional work ordered in the time and the manner herein provided and all temporary materials and special and other articles of appliances of every sort, kind and description whatsoever intended or used thereof.
- (h) "Drawing" shall mean the drawings referred to in the specifications and any modifications of such drawings approved in writing by Engineer and such other drawings as may from time to time be furnished or approved in writing by the Engineer.
- (i) "Engineer's representative" shall mean an assistant of the Engineer notified in writing to the contractor by the Engineer.
- (j) "Provision sum" or "Provisional lump-sum" shall mean a lump sum included by Government in tender documents and shall represent the estimated value of work for which details are not available at the time of issue of tender.
- (k) "Provisional items" shall mean items for which approximate quantities have been included in the tender documents.

- (l) The "Site" shall mean the Lands and / or other places, on, under, in or through which the work is to be executed under the contract including any other lands or places which may be allotted by Government or used for the purpose of contract.
- (m) The "Work" shall mean the works to be executed in accordance with the Contract or part (s) thereof as the case may be and shall include all extra, additional, altered or substituted works as required for performance of the Contract.
- (n) The "Contract Sum" shall mean the sum for which the tender is accepted.
- (o) The "Accepting authority" shall mean the officer competent to accept the tender. The "Accepting Authority" shall mean the **Executive Engineer, Raigad Irrigation Division, Kolad.**
- (p) The "Day" shall mean a day of 24 hours from midnight to midnight irrespective of the number of hours worked in any day in that week.
- q) "Temporary Works" shall mean all temporary works of every kind required in or about the execution completion or maintenance of the work.
- r) "Urgent Works" shall mean any measure 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 which become necessary for security of the work or the persons working thereon.
- s) A "Week" shall mean seven consecutive days without regards to the number of hours worked on any day in that week.
- t) "Excepted Risks" are risks to riots (otherwise than among contractors employees) and civil commotions (in so far as both these are uninsurable) war (whether declared or not)
invasion, act of foreign enemies, hostilities, civil war, rebellion, revolution, insurrection, lightening and unprecedented floods over which the contractor has no control and accepted as such by the accepting authority. Where the context so requires, words importing the singular number only also include the plural number and vice-versa.

Heading and Marginal notes if any to the general condition shall not be deemed to form par thereof or be taken into consideration in the interpretation or construction thereof the contract.

Wherever, there is mention of "Schedule of Rates" of the division or simply D.S.R. of schedule rates in this tender, it will be taken to mean as "The schedule of rate of the Division in whose jurisdiction the work lies"

4. ERRORS, OMISSION AND DISCREPANCIES:

- (a) In case of errors, omissions and / or disagreement between written and scaled dimensions on the drawing or between drawings and specifications etc. The following order of preference shall apply.
- i) Between actual scaled and written dimensions or descriptions on a drawing the latter shall be adopted.
 - ii) Between the written or shown description of dimensions in the drawing and corresponding one in the specifications, the latter shall apply.
 - iii) Between the quantities shown in schedule of quantities and those arrived at from the drawings, the latter shall be preferred.
 - iv) Between the written description of the item in the schedule of quantities and the detailed description in the specifications of the same items, the latter shall be adopted.
- (b) In case discrepancy between percentage rates quoted in figures and words, the lower of the two will be considered for acceptance of the tender.
In case of difference between the rates written in figures and words, the rate adopted by the contractor for working out the total amount of the item will be taken as correct. In other cases correct rate would be that, which is lower.
- (c) In all cases of omissions and / or doubts or discrepancies in the dimensions or description of any item or specification, reference shall be made to **Executive Engineer, Raigad Irrigation Division, Kolad, Raigad.** whose elucidation, elaboration or decision shall be considered as authentic. The contractor shall be held responsible for any errors that may occur in the work through lack of such reference and precaution.
- (d) The special provisions in detailed specifications and wording of any item shall gain precedence over corresponding contractor provisions (if any) in the standard specifications of public works department Hand Book where reference to such specifications is given without reproducing the details of contract.

4.2 The work is required to be completed within a stipulated period (including monsoon period).The contractor shall submit the tentative Bar Chart before the commencement of work.

5. METHODOLOGY OF CONSTRUCTION AND CONSTRUCTION EQUIPMENTS :-

5.1 Construction Machinery / Equipments:

- 5.1.1 The methodology and equipments to be used on the project shall be furnished by the Contractor to the Engineer-In-Charge well in advance of commencement of work and approval of the Engineer-In-Charge obtained prior to its adoption and use.

- 5.1.2 The Contractor shall give, a trial run of the equipment for establishing its capability to achieve the laid down specifications and tolerance to the satisfaction of the Engineer-in-Charge before commencement of work, if so desired by the Engineer-In-Charge.
- 5.1.3 All equipments provided shall be of proven efficiency and shall be operated and maintained at all times in the manner acceptable to the Engineer-In-Charge.
- 5.1.4 No equipment or personnel shall be removed from the site without permission of the Engineer-In-Charge.
- 5.1.5 Contractor shall furnish at least 15 days in advance his programme of commencement of item of work, the details of actual methods that would be adopted by the contractor for the execution of various items of work supported by necessary detailed drawings and sketches including those of the plant and machinery that would be used, their locations, arrangements for conveying and handling materials etc. and obtain prior approval of the Engineer-In-Charge well in advance of starting of such item of work. The Engineer-In-Charge reserves the right to suggest modifications or make complete changes in the method proposed by the contractor, whether accepted previously or not at any stage of the work, to obtain desired accuracy quality and progress of the work which shall be binding on the contractor, and no claim on account of such change In method of execution will be entertained by Government so long as specifications of the item remain unaltered. The sole responsibility for the safety and adequacy of the methods adopted by the contractors, will however, rest on the contractor, irrespective of any approval given by the Engineer.

6. WORKING METHODS:

Contractor shall submit, within times stipulated time by the Engineer, in writing the details of actual methods that would be adopted by the contractor for the execution of any item as required by Engineer, at each of the locations, supported by necessary detailed drawings and sketches including those of the Plant and Machinery that would be used, their locations, arrangement for conveying and handling materials etc. And obtain prior approval of the Engineer-in-charge well in advance of starting of such item of work The Engineer-in-charge reserves the right to

suggest modifications or make complete changes in the method proposed by the contractor, whether accepted previously or not, at any stage of the work. to obtain the desired accuracy, quantity and progress of the work which shall be binding on the contractor, and no claim on account of such change in method of execution will be entertained by Government so long as specifications of the item remain unaltered.

6.1 WORK METHODOLOGY FOR SEAL COAT

Liquid seal coat shall be executed as per clause No.511 of specification for roads and Bridges work of MORT&H specification 2013 and latest reprint amendments. Preparation of surface to receive seal coat shall be as per 511.3.2 and in one go 200 m. only.

The Preparation of surface for seal coat and construction of seal coat as per clause 511.3.2 &511.3.3 responsively as mention above shall be done in 200m. in one go. 200 m. cycle shall be repeated throughout the day and at the end of the working day any fraction left measuring less than 200 m shall be done separately, as mentioned herein.

6.2 PROGRESSIVE METHODOLOGY.

The work methodology as described above shall then be followed for next 200mts. and thus progressively for entire length of road.

6.3 MODE OF INSPECTION AND MEASUREMENT

The Executive Engineer shall remain present and personally supervise the first 200 mtrs. Length, accordingly in presence of Deputy Engineer, Junior Engineer and Contractor/Contractor's representative. The Deputy Engineer shall remain present and personally supervise at least 25% of the area of seal coat executed.

The Junior Engineer shall remain present and personally supervise cent percent length executed.

The Executive Engineer shall show the check measurement of carpet and liquid seal coat accordingly in the measurement book for the executed 200 Mtrs. demo length. This check measurement shall be part of percentage check measurement required by Executive Engineer as per the Maharashtra Public Works Manual, Appendix-24.

The measurement of liquid seal coat of the work shall be recorded by Deputy Engineer only.

6.4 Government reserves right to appoint supervisory consultant

- a. To Technical supervise the work.
- b. To check the levels by Total Station taken and submitted by contractor.
- c. To record the day to day activities, measurement, registers at site and plant all necessary.
- d. To maintain the records of site activities
- e. To carry out field tests at site as required by frequency of vigilance quality control and maintain the register of the same.

The contractor shall furnish required survey drawing, staff and necessary equipment's, labours / assistance / electronic equipment for taking measurements and recording the activities register at field at site.

7. PROGRESS SCHEDULE:

- 7.1 The contractor shall furnish within the period stipulated in writing by the Engineer-in charge, of the order to start the work, a progress schedule in quadruplicate indicating the date of actual start, the monthly progress expected to be achieved and the anticipated completion date of each major item of work to be done by him, also indicating dates of procurement and setting up of materials, plant and machinery. The schedule is to be such as is practicable of achievement towards the completion of the whole work in the time limit, the particular items, if any, on the due dates specified in the contract and shall have the approval of *the* Engineer-in- charge. No revised schedule shall be operative without such acceptance in writing. The Engineer is further empowered to ask for more detailed schedule or schedules say week by week for any item, in case of urgency of work as will be directed by him and the contractor shall supply the same as and when asked for.

- 7.2 The Contractor shall furnish sufficient plant, equipment and labour as may be necessary to maintain the progress of schedule. The working and shift hour's restricted to one shift a day for operations to be done under the Government supervision shall be such as may be approved by the Engineer-in-charge. They shall not be varied without the prior approval of the Engineer. Night work which requires supervision shall not be permitted except when specifically allowed by Engineer each time, if requested by the Contractor. The Contractor shall provide necessary lighting arrangements etc. For night work as directed by Engineers without extra cost.

7.3 Further, the contractor shall submit the progress report of work in prescribed forms and charts etc. At periodical intervals, as may be specified by the Engineer-in charge. Schedule shall be in form of progress charts, forms, progress statement and/or reports as may be approved by the Engineer.

7.4 The contractor shall maintain proforma, charts, details regarding machinery, equipment, labour, materials, personnel etc. As may be specified by the Engineer and submit periodical returns thereof as may be specified by the Engineer-in-charge.

7.5 PRIORITIES OF WORKS TO BE EXECUTED:

Priorities for items to be executed shall be determined periodically keeping in view of the final time limit allowed for the work and all the time schedule fixed for intermediate stages of work.

7.6 Revised Programme of Work in case of slippage:

In case of slippage from the approved work programme at any stage, the contractor shall furnish revised programme to make up slippage within the stipulated time schedule and obtain the approval of the Engineer-in-charge to the revised programme.

7.7 Action in case disproportionate progress:

In case of extremely poor progress of the work or any item at any stages of work which in the opinion of the Engineer-In-Charge cannot be made good by the Contractor considering his available resources, the Engineer-In-Charge will get it accelerated to make up the lost time through any other agency, and recover the additional cost incurred, If any, in getting the work done from the Contractor after informing him about the action envisaged by him.

8. TREASURE-TROVE:

In the event of discovery by the contractor or his employees, during the progress of the work of any treasure, fossils, minerals or any other articles of value or interest, the contractor shall give immediate intimation thereof to the Engineer and forthwith hand over to the Engineer such treasure or things which shall be the property of Government.

9. AGENT AND WORK-ORDER BOOK:

The contractor shall himself manage the work or engage an authorized all-time agent on the work capable of managing and guiding the work and understanding the specifications and contract condition. A qualified and experience, Engineer shall be provided by the Contractor as his agent for technical matters in case the Engineer-in charge considers this as essential for the work and so directs contractors. He will take orders as will be given by the Executive Engineer or his representative and shall be responsible for carrying them out. This agent shall not be changed without prior intimation to the Executive Engineer and his representative on the work site. The contractor shall supply to the Engineer the details of all supervisory and other staff employed by the Contractor and notify changes when made, and satisfy the unquestionable right to ask for change in the quality and numbers of contractor's supervisory staff and to order removal from work of any of such staff. The contractor shall comply with such orders and effect replacements to the satisfaction of the Engineer.

A work-order book shall be maintained on site and it shall be the property of Government and the Contractor shall promptly sign orders given therein by Executive Engineer or his representative and his superior officers, and comply with them. The compliance shall be reported by the contractor to the Engineer in good time so that it can be checked. The blank work order book with machine numbered pages will be provided by the Department free of charge for this purpose. The contractor will be allowed to copy out instructions therein from time to time.

10. SETTING OUT FOR BUILDING**WORKS :- Setting out:**

The Engineer-in-charge shall furnish the contractor with only the four corners of the works site and a level bench mark and the contractor shall set out the works and shall provide an efficient staff for the purpose and shall be solely responsible for the accuracy of such setting out.

The contractor shall provide, fix and be responsible for the maintenance of all stacks, templates, level marks, profile and other similar things and shall take all necessary precautions to prevent their removal or disturbance and shall be responsible for the consequence of such removal or disturbance, should the same take place and for their efficient and timely reinstatement. The contractor shall also be responsible for the

maintenance of all existing survey marks, boundary marks distance marks and center line marks, either existing or supplied and fixed by the contractor. The work shall be set out to the satisfaction of the Engineer-in-charge. The approval thereof or joining with the contractor by the Engineer-in-charge in setting out the work shall not relieve the contractor of any of his responsibilities.

Before beginning the work, the contractor shall at his own cost provide all necessary reference and level posts, pegs, bamboos, flags, ranging rods, strings and other materials for proper layout of the work in accordance with the scheme for bearing marks acceptable to the Engineer-in-charge. The center, longitudinal or face lines and cross lines shall be marked by means of small masonry pillars. Each pillar shall have distinct mark at the center to enable the theodolite to be set over it. No work shall be started until all these points are checked and approved by the Engineer-in-charge in writing but such approval shall not relieve the contractor of any of his responsibilities. The contractor shall also provide all labour, material and other facilities, as necessary, for the proper checking of layout and inspection of the points during construction.

Pillars bearing geodetic marks located at the sites of units of works under construction should be protected and fenced by the contractor.

On completion of works, the contractor must submit the geodetic documents according to which the work was carried out.

- 10.1 The contractor shall provide free of charge all labour and materials required for lining out, surveying, inspection decided by the Engineer as considered necessary for the proper and systematic execution of the work, Likewise only one bench mark with definite value of R.L. will be shown to contractor who shall have to provide for network of temporary benchmark's all along the road as required for executive the work. The contractor shall be responsible for the provision, accuracy and maintenance of such temporary bench mark. He shall be responsible for the correctness of the position, levels, dimensions and alignments of all parts of the works and provisions of necessary instruments and labour in connection with it. The contractor shall provide scientific instruments and labour in connection with it. The contractor shall provide like theodolite and leveling instruments and steel tapes for lining out the bridge suitable masonry pedestals or wooden stacks firmly fixed shall be provided by the contractor for marking the Center lines of the structures.

The checking or inspection of any setting out of any line or level or word by Engineer or his representative shall not in any way leave the contractor of his responsibility for correctness thereof. The contractor shall carefully protect and preserve bench mark pedestals and stone etc. used in setting of the works.

WATER :- If the potable water is not available in the river bed the contractor has to make his own arrangements for potable water required for concrete mixing, its curing and other parts of the construction for which no extra claim will be paid by the department.

10.2 RESPONSIBILITIES FOR LEVEL AND ALIGNMENT. :-

The Contractor shall be entirely and exclusively responsible for the horizontal and vertical alignment, the levels and correctness of every part of the work and shall rectify effectively any errors or imperfections therein, such rectifications shall be carried out by the Contractor, at its own cost, when instructions are issued to that effect by the Engineer- in-charge.

10.3 LEVELLING INSTRUMENTS:

If measurements of items of the work are based on volumetric measurements calculated from levels taken before and after construction of the item, a large number of leveling staffs, tapes Total Station equipment with accessories etc. will have to be kept available by the Contractor at the site of work for this purpose. Lack of such leveling staffs, tapes, Total Station equipment with accessories etc. in required numbers may cause delay in measurements of the work. The Contractor will have therefore to keep sufficient number of these readily available at site and in good working condition.

10.4 To carry out activities mentioned above 10.1, 10.2 & 10.3

Contractor shall make all necessary arrangements to carry out all necessary detail surveys required as per the Specifications / Tender Conditions, during currency of work / project, and deliver desired outputs in printed / soft as instructed by engineer in charge at different stages of works as instructed by the engineer in-charge during the currency of the project, that is from start to finish of the work/project.

To carry out such surveys and deliver desired outputs in printed form / soft copy as instructed by Engineer in charge as mentioned above.

The Contractor shall appoint a survey agency with the approval of the engineer in charge, for that, Contractor shall submit list of three survey agencies to engineer in charge , along with the payment of his security deposit (as required under the clause one of the B-1 contract) . The engineer in charge on receipt of such list will select one survey agency out of three and communicate it, along with the work order to contractor. Contractor should appoint survey agency as selected by the engineer in charge. The survey agency shall not be changed without permission of the engineer in charge.

The survey agency and / or contractor shall have.....

- 1) Latest survey instruments and/or equipments viz. total station, auto levels, plotter etc.
- 2) Auto CAD, non-auto CAD base software to deliver desired outputs based on survey carried out using (1) above, in printed/soft copy as instructed by engineer in charge.
- 3) Necessary trained manpower to work on and deliver as (1) and (2) above. For appointing survey agency, to carry out such surveys and deliver desired outputs in printed/soft as instructed by engineer in charge as mentioned above the Contractor shall not be paid separately. His offer shall be inclusive of all.

11) AUTHORITIES OF THE ENGINEER-IN-CHARGE REPRESENTATIVE

The duties of the representative of the Engineer-in-charge are to watch and supervise the work and to test and examine any material to be used or workmanship employed in connection with the works.

The Engineer-in-charge may from time to time, in writing delegate to his representative any powers and authorities vested in the Engineer-in-charge and shall furnish to the Contractor a copy of all such delegations of powers and authorities. Any written instructions of Approval given by the representative of the Engineer-in-charge to the Contractor within the terms of such" delegations (but not otherwise) shall bind the Contractor and the department as through it had been given by the Engineer-in charge, provided always as follows.

Failure of the representative of the Engineer-in-charge to disapprove any work or materials shall not prejudice the power of the Engineer-in-charge thereafter to disapprove such work or materials and so order the putting down, removal or breaking up thereof.

11.1 Government reserves right to appoint supervisory consultant

- a. To Technical supervise the work.
- b. To check the levels by Total Station taken and submitted by contractor.
- c. To record the day to day activities, measurement, registers at site and plant all necessary.
- d. To maintain the records of site activities.
- e. To carry out field tests at site as required by frequency of vigilance quality control and maintain the register of the same.

The contractor shall furnish required survey drawing, staff and necessary equipment's, labours / assistance / electronic equipment for taking measurements and recording the activities register at field at site.

12) INITIAL MEASUREMENTS FOR RECORD:

Where for proper measurement of the work, it is necessary to have an initial set of levels or other measurements taken, the same as recorded in the authorized field book or measurement book of Government by the Engineer or his authorized representative will be signed by the contractor who will be entitled to have a true copy of the same made at his cost. Any failure on the part of the contractor to get such levels etc. Recorded before starting the work, will render him liable to accept the decision of the Engineer as to the basis of taking measurements.

Like-wise the contractor will not cover any work which will render its subsequent measurements difficult or impossible without first getting the same jointly measured by himself; and the authorized representative of the Executive Engineer. The record of such measurements on the Government side will be signed by the Contractor and he will be entitled to have a true copy of the same made at his cost.

13 HANDING OVER OF WORK:-

All the work and materials before finally taken over by Government will be the entire liability of the Contractor for guarding, maintaining and making good any damages of any magnitude interim payments made for such work will not alter this position. The handing over by the Contractor and taking over by the Executive Engineer or his authorized representative will be always in writing, copies of which will go to the Executive Engineer or his authorized representative and the contractor. It is, however understood that before taking over such work, Government will not put it into regular use as distance from casual or incidental one, except as specially mentioned elsewhere in this contact, or as mutually agreed to.

14. ASSISTANCE IN PROCURING PRIORITIES, PERMITS ETC. :-

The Engineer, on a written request by the contractor, will if in his opinion, the request is reasonable and in the interest of work and its progress, assist the contractor in Securing, the priorities for deliveries, transport permits for controlled materials etc., where such are needed. The Government, will not, however be responsible for the non-availability of such facilities or delay in this behalf and no claims on account of such failures or delays shall be allowed by the Government. The Contractor shall have to make his own arrangement for machinery required for the work. Such machinery conveniently available with the Department may be spared as the rules in force on recovery of necessary Security Deposit and rent with Agreement in the prescribed Signature of Contractor form. Such an Agreement shall be independent of this contract and the supply of machinery shall not form a ground for any claim or extension of time limit for this work.

The Engineer in charge on a written request by the contractor will if in his opinion assist administratively the contractor for getting permission from other Department / Board / Institution / Govt. Offices as required.

Contractor shall have to obtain necessary permissions from concern authority for execution of work at his own risk and cost.

No extension of time limit will be granted for delay in obtaining permission executing other department work on the case may be.

15. A) The Contractor shall set up and get it checked and certified by the Executive Engineer, a field laboratory with necessary equipments for testing of all materials, finished products used in the construction as per requirements of relevant specifications. The testing of all materials shall be carried out by the Engineer, or his representative for which the contractor shall make all the necessary arrangements and bear the entire cost.

B) At least 30% of the tests of those required as per frequency chart given in Clause 15.1 shall be carried out in Government Laboratories of Vigilance & Quality Control Circle. All the tests which cannot be carried out in field laboratory shall be carried out 100% at the contractor's cost in Vigilance & Quality Control laboratory.

C) The tests which cannot be carried out both in field laboratory and Vigilance & Quality Control Circle's laboratories shall be carried out 100% in the laboratories of Government Engineering College / Government Polytechnic at the entire cost of Contractor.

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ADDITIONAL CONDITIONS FOR MATERIALS

- 1 All the materials such as cement, steel, asphalt etc. shall be procured by the contractor from approved Government institution or as directed by Engineer-in-charge only. The material shall be brought at the site of work well in advance by the contractor. The gate pass of the cement, steel, asphalt etc. shall be examined by the authorized representative of the Engineer-in-charge.
- 2 The contractor shall submit periodically as well as on completion of work, an account of all materials used by him on the work. In addition, a separate register shall be maintained on site for recording daily item wise asphalt, consumption and also item wise consumption of the other material. This shall be signed daily by contractor or his representative and representative of Engineer-in-charge.
- 3 All the material required for the work shall be procured from the approved Govt. Institution or as directed by Engineer-in-charge only. The material from any other source in lieu of the approved Institution shall not be allowed except under written permission from the Executive Engineer. In such case, certificate for its quality shall be produced by the contractor and samples of materials shall be tested from any Government Laboratory by the contractor at his own cost and the test result be supplied to the Department. The materials not conforming to the required standard shall be removed at once from the site of the work by the contractor at his own cost. All the materials such asphalt etc. required for use in the work shall be confirming to the concerned I S./M.O S.T. specification. The contractor shall get necessary tests carried out to the frequency specified for each material in the specification and submit the test result to the Engineer-in-charge or his authorized representative. These materials shall be used on work by the contractor, only if the tests thereof are found satisfactory in the Engineer-in-charge or his authorized representative. These materials shall be used on work by the contractor, only if the tests thereof are found satisfactory to the Engineer-in-charge or his authorized representative for the purpose of daily testing of material such as metal sand, rubble etc. The contractor shall make his own arrangement to install a well equipped laboratory at the site of work at his own cost. The Contractor shall employ qualified personnel in this laboratory at his own cost. The responsibility of carrying out tests to the frequency specified for the material shall rest with the contractor.

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- 4 Contractor shall Construct at his own cost shed/sheds as per direction of the Engineer-in- charge of the work for storing the material and provide double locking arrangements. The Store shed such constructed shall be removed in completion of work. The contractor shall take all necessary steps to guard the material brought by work.
- 5 The contractor shall make his own arrangements for the safe custody for the materials brought by him on site of work.
- 6 The charges for conveying of materials for place of purchase by the contractor on the site of work and the actual spot on work site shall be entirely borne by the contractor no claims on this account shall be entertained.
7. The material required only for this work shall be kept in the godown at site. no materials shall be shifted outside of the godown except for which this agreement is entered without prior approval of the Engineer-in-charge.
8. The contractor shall produce sufficient documentary evidence i.e. bill for the purchase, octroi receipts etc. for the purchase of material brought on the work site at once if so request by the Department.
9. All these material i.e. cement, steel, bitumen etc. shall be protected from any damages, rains etc by the contractor at his own cost.
10. The contractor will have to erect temporary shed of approved specification for storing of above materials at work site having double lock arrangement (by double lock it is meant the godown shall always be locked by two locks, one lock being owned and operated by contractor and other by Engineer-in-charge or his authorized representative and the doors shall be openable only after both locks are opened.
11. If required, the weighment of cement bags/steels/bitumen etc. brought by the contractor shall be carried out by the contractor at his own cost.
12. The contractor shall not use cement and other material for the to be executed outside the scope of this contract except for such this work as may be decided by the Engineer-in-charge.

13. The Government shall not be responsible for the loss in cement and steel during transit to work site. The cement brought by the contractor at the work site store shall mean 50 Kg. Equivalent 0.0347 cubic meter per bag by weight. The rate quoted should correspond to this method of reckoning. In case of ordinary/ controlled concrete if cement is found short, the short/storage's will be good by the contractor at his cost.
14. The R.C.C pipes required for the work shall be procured from the MISSIDC only. The payment toward providing and fixing NP2 / NP3 / NP4 pipes will be released only after the contractor submits bills of MISSIDC to authenticate that the pipes have been purchased from the MISSIDC. No payment towards the item of providing and laying of the pipe will be released in absence of the sub of requisite document. After completion of these items in the particular kilometer the withheld pap will be finally released.
15. **Indemnity:** The condition regarding Indemnity as defined on pages at Sr. No. 4 will apply mutatis mutandis in case of material brought by contractor at the site for the execution of the work being executed under this contract.
16. In case the material brought by the Contractor become surplus owing to the change in the design of the work, the material should be taken back by the Contractor at his own cost after prior permission of Engineer in Charge.
17. All empty cement bags shall be returned by Contractor to Department and the Executive Engineer shall preserve them for one year as token of proof of use of cement in proper proportion in work.

SPECIAL ATTENTION OF CONTRACTOR FOR EXECUTION**Procurement of material: -**

1. Department will not supply any material for execution of work such as Cement, Tor Steel, Asphalt etc. The contractor has to arrange the same from his own source. The quality of the material brought to the site by the contractor should be verified through the various tests provided as per relevant Indian Standards at the cost of the contractor.
2. The adjustment for variation in cost prices of Mild steel and Tor steel bars, structural steel cement (all tested quality) shall be separately made corresponding to the difference in the cost as per the basic price mentioned hereafter and the purchase price of the material subject to limitation of price.
3. The contractor shall construct shed / sheds at his own cost and as per direction of the Engineer-in-charge for storing the materials brought by him and provide double locking arrangements, one lock shall be in the charge of departmental person and material shall be taken for use in presence of the departmental person only.

16. CO-ORDINATION:-

When several agencies for different sub-work of the project are to work simultaneously for the timely completion of the whole project smoothly, the scheduled dates for completion specified in each contract shall therefore be strictly adhered to. Each contractor may make his independent arrangement for water, power, housing etc. If they so desire. On the other hand the contractors are at liberty to mutual agreement in this behalf and make joint arrangements with the approval of the Engineer. No single contractor shall take or cause to be taken any steps or action that may cause disruption, discontent, or disturbance of the work labour or arrangement etc. of other contractor in the Project localities. Any action by any contractor which the Engineer in his unquestioned discretion may consider as infringement of the above code, would be considered as a breach of the contract conditions and shall be dealt with as such. In case of any dispute, disagreement between the contractors, the Engineer's decision regarding the co-ordination, co-operation and facilities to be provided by any of the contractors shall be final and binding on the contractors concerned and such a decision or decisions shall not violate any contract nor absolve the contractor's of his/their obligations under the contract nor consider for the grant for any claim or compensation.

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17. PATENTED DEVICE

Whenever the contractor desires to use any designed devices, materials or process covered by the letter of patent or copy right, the right for such use shall be secured by suitable legal arrangement and agreement with patent owner and the copy of their agreement shall be filed with the Engineer-in-charge if so desired by the letter.

18. PAYMENTS

The contractor must understand clearly that the rates quoted are for completed work and include all cost due to labour, scaffolding, plant, machinery, supervision, power, royalties, taxes etc. and should also include all expenses to cover the cost of height work as and when required and no claim for additional payment beyond the prices or rates quoted will be entertained. The mode of measurement has been indicated in the specifications. If there is any ambiguity or doubt in this respect, the decision of Superintending Engineer will be final.

19. SUPERVISION AND INSPECTION OF WORKS AND QUALITY CONTROL:-**19.1 SUPERVISION :-**

The Contractor shall either himself supervise the execution of the works or shall appoint the competent agent approved by the Engineer-in-charge, to act on his behalf. If in the opinion of the Engineer-in-charge, the Contractor has himself no sufficient knowledge and experience of receiving instructions or cannot give his full attention to the works, the Contractor shall at his own expenses employ as his accredited agent & qualified Engineer approved by the Engineer-in-charge. Orders given to the Contractor's agent shall be considered to have the force as if these had been given to the Contractor himself. If the Contractor fails to appoint a suitable agent as directed by the Engineer-in-charge, the Engineer-in-charge shall have full power to suspend the execution of the work until such date a suitable agent is appointed and the Contractor shall be responsible for the delay so caused to the works and the Contractor shall not be entitled for any compensation on this behalf.

19.2 INSPECTION:-

The Contractor shall inform the Engineer-in-charge in writing -when any portion of the work is ready for inspection giving him sufficient notice to enable him to inspect the same without affecting the further progress of

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the work. The work shall not be considered to have been completed in accordance with the terms of the contract until the Engineer-in-charge shall have certified in writing to that effect. Approval of materials or workmanship or approval of part of the work during the progress of execution shall not bind the Engineer-in-charge or in any way affect him even to reject the work which is alleged to be completed and to suspend the issue of his certificate of completion until such alteration and modifications or reconstruction have been effected at the cost of the Contractor as shall enable him to certify that the work has been completed to his satisfaction.

The Contractor shall provide at his cost necessary ladders and such arrangements as to provide necessary facilities and assistance for proper inspection of all parts of the work at his own cost.

19.3 TEMPORARY QUARTERS:

- i) The contractor shall at his own expense maintain sufficient experienced supervisory staff etc.

Required for the work and shall make his own arrangement, provide housing for them with all necessary arrangements, including fire preventive measures etc. as directed by the Engineer- in- charge.

- ii) The contractor shall provide, furnish, maintain and remove on completion of the work, a suitable office on the work-site for the use of Executive Engineer's representative. The covered area for office exclusive of varandha should not be less than 24 Square Meter and height 3.0 meter It have Brick masonry walls and asbestos or corrugated iron roof, paved floor should be 18" above ground level. He should provide a basket type latrine, urinals and keep them clean, daily. The contractor shall have provide Laboratory (with ref. books & I.S. codes) at site of size 6.0 m x 6.0m minimum and height 3.0 meter at work site. The office and Laboratory structures shall be semi permanent type. This will be supposed to be included in his rates.

19.4 SAFETY MEASURES AND AMENITIES:

While executing the work, necessary precautions regarding safety of labour, supervisory staff public and traffic users shall be taken by the agency according to rules and regulations specified by the Government of India / Government of Maharashtra.

- 1) The contractor shall take all necessary precautions for the safety of the workers and preserving their health while working in such job as require special protection and precautions. The following are some of the

requirements listed, though no exhaustive. The contractor shall also comply with the directions issued by the Engineer in this behalf from time to time and at all times.

- 2) **Labour License:** It shall be obligatory on the part of the contractor to obtained the necessary labour License from the labour Department within fortnight of issue of work order.
- 3) Providing protective foot-wear to workers, in situations like mixing and placing of mortar of concrete in quarries and places where the work is done under too much of wet condition as also for movements over surfaces infected with Dyster growth etc.
- 4) Providing protective head wear to workers, working in quarries etc. to protect them against accidental fall of materials from above.
- 5) Taking such normal precautions like providing hand rails at the edges of the floating platform or barges, not allowing nails or metal parts or useless timber to spread around etc.
- 6) Supporting workmen with proper belts, ropes etc. when working on any masters, cranes grabs, hoist, dredgers etc.
- 7) Taking necessary steps towards training the workers concerned in the use of machinery before, they are allowed to handle it independently and taking all necessary precautions in and around the areas where machines, hoists and similar units are working.
- 8) Providing adequate number of boats (of at all required for playing water) to prevent overload and over-crowding.
- 9) Providing life belts to all men working in such situation from where they may accidentally fall into the water, equipping the boats with adequate number of life belts etc.
- 10) Avoiding bare live wires etc. As would electrocute workers.
- 11) Making all platforms, staging and temporary structures sufficiently strong so as not to cause inconvenience and risk to the workmen and supervisory staff.
- 12) Providing sufficient first aid trained staff and equipment to be available quickly at the work site to render immediate first aid treatment in case of accidents due to suffocations, dropping and other injuries.
- 13) Take all necessary precautions with regard to use of divers.
- 14) Providing full length gum boots, leather hand gloves with fire proof apron to cover the chest and back reaching up to knees and protective goggles for the eyes to the labourers working with hot asphalt handling vibrator in cement concrete and also where use of any or all these items is beneficial

in the interest of health and well being of the labours in the opinion of the Engineer.

20. EXPLOSIVES :-

The Contractor shall at his own expense construct and maintain proper magazines, if such required for the storage of explosives for use in connection with the works, and such magazine, being situated constructed and maintained in accordance with the Government Rules applicable in that behalf. The contractor shall at his own expenses obtain such Licenses as may be necessary for storage of explosives are approved by the Engineer, the Government shall not be incurring any responsibility whatever in connection with storage and use of explosives on the size or any accident or occurrence whatsoever in connection therewith, all operations in or for which explosives are employed being at the risk of the contractor and upon his sole responsibility and the contractor here by gives to Government an absolute indemnity in respect thereof.

21. DAMAGE BY FLOODS OR ACCIDENTS :-

The contractor shall take all precautions against damage by floods or like or from accident etc. No compensation will be allowed to the Contractor on this account or for correcting and repairing any such damage to the work during construction. The contractor shall be liable to make good at his cost any plant or materials belonging to the Government, lost or damaged by floods or from any other cause which is in his charge.

22. RELATION WITH PUBLIC AUTHORITIES :-

The contractor shall comply with all rules, regulation, bye-laws and direction given from time also by any local public authority in connection with this work and shall himself pay fees or charges which are leviable on him without any extra to the Department.

23 POLICE PROTECTION:

For the Special Protection of camp and the contractor's works, the department will help the contractor as far as possible to arrange for such protection with the concerned authorities if so required by the Contractor in writing. The full cost of such protection shall be borne by the contractor.

24 MEDICAL AND SANITARY ARRANGEMENTS TO BE PROVIDED FOR LABOUR EMPLOYED ON THE CONSTRUCTION BY THE CONTRACTOR

- a) The contractor shall provide an adequate supply of potable water for use of labourers on work and in Camps.
- b) The contractor shall construct trench or semi permanent latrines for the use of the Labourers. Separate latrines shall be provided for men and women.
- c) The contractor shall build sufficient number of huts on a suitable plot of land for use of the Labourers according to the following specifications.

1. Huts of Bamboos and Grass may be constructed.

A good site not liable to submergence shall be selected on high ground remote from jungle but well provided with trees, shall be chosen where it is available. The neighborhood of tank, jungle, grass or woods should be particularly avoided. Camps should not be established close to large cuttings of earth work. The lines of huts shall have open spaces of at least ten meters between rows. When a good natural site cannot be procured, particular attention should be given to the drainage. There should be no overcrowding. Floor space at the rate of 30 Sq.ft. Per head shall be provided. Care should be taken to see that the huts are kept clean and in good order.

The Contractor must find his own land and if he wants Government land, he should apply for it and pay assessment for it, if made available by Government.

The contractor shall construct a sufficient number of bathing places. Washing places should also be provided for the purpose of washing clothes. The Contractor shall make sufficient arrangements for draining away the surface and sullage water as well as water from the bathing and washing places and shall dispose of this waste water in such way as not to cause any nuisance.

The contractor shall engage a Medical officer with a traveling dispensary for a Camp containing- 500 or more persons if there is no Government or other private dispensary situated within 8 kilometers from the Camp. In case of emergency the contractor shall arrange at his cost for transport for quick medical help to his sick worker.

The Contractor shall provide the necessary staff for effecting a satisfactory drainage system and cleanliness of the camp to the satisfaction of the Engineer. At least one sweeper per 200 persons should be engaged.

The Assistant Director of Public Health shall be consulted before opening a labour camp and his instruction on matters such as water supply sanitary conveniences, the camp site accommodation and food supply shall be followed by the Contractor.

2 . The contractor shall make arrangement for all anti-malaria measures to be provided for the labour employed on the work. The anti-malaria measure shall be provided as directed by the Assistant Director of Public Health.

25. QUARRIES:-

The quarrying operations shall be carried out by the Contractor with proper equipment such as compressors. Jack-hammers, drill bits, explosives etc. and sufficient number of workmen shall be employed so as to get the required out turn.

25.2 The Contractor shall carry out the works in the quarries in conformity with all the rules and regulations already laid down or may be laid down from time to time by Government. Any cost incurred by Government due to non-compliance of any rules or regulations or due to damages by the contractor shall be the responsibility of the Contractor. The Engineer-in-charge or his representative shall be given full facilities by the Contractor for inspection at all times of the working of the quarry, records maintained, the stocks of the explosives and detonators etc. so as to enable him to check that the working records and storage are all in accordance with the relevant rule. The Engineer-in-charge or his representative shall at any time be allowed to inspect the works, buildings, and equipment at the quarters.

25.3 The Contractor shall maintain at its own cost, the book registers etc. required to be maintained under the relevant rules and regulations and as directed by the Engineer-in-charge. These books shall be open for inspection at all times by the Engineer-in-charge or his representative and the Contractor shall furnish the copies or extracts of books or register as and when required.

25.4 All quarrying operations shall be carried out by the Contractor in organized and expeditious manner systematically and with proper planning. The Contractor shall engage licensed blaster and adopt electric

blasting and/or any other approved method which would ensure complete safety to all the men engaged in the quarry and its surroundings. The Contractor shall himself provide suitable magazines and arrange to pre and store explosive etc. as required under the rules at his own cost. The designs and the location of the magazine shall be got approved in advance from the Chief Inspector of Explosives and the rules and regulations in this connection as laid down by the Chief Inspector of Explosives from' time to time shall be strictly adhered to by the Contractor. It is generally experienced that it takes time to obtain the necessary license for blasting & license for storage of material from the concerned authorities. The contractor must therefore take timely advance action for procuring all such licenses so that the work progress may not be hampered.

- 25.5 The approaches to the quarrying place from the existing public roads shall have to be arranged by the Contractor at his own cost, and the approach shall be maintained by the contractor at his own cost till the work is over.
- 25.6 The quarrying operations shall be carried out by the Contractor to the entire satisfaction of the Engineer-in-charge and the development of the quarry shall be made efficiently so as to avoid wastage of stones. Only such stones as are of the required quality shall be used on the work. Any stone such is in the opinion of the Engineer-in-charge, not in accordance with the specifications or of required quality will be rejected at any time, at the quarry or at the site of work. The rejected stones shall not be used on the work and such rejected materials shall be removed to the place shown at the Contractor's cost.
- 25.7 Since all stones quarried from Government quarry (if made available) by the contractor including the excavated over burden are the property of the Govt. no stones or earth shall be supplied by the Contractor to any other agencies or works are allowed to be taken away for any other works.

All such surplus quarried materials not required for work under this contract shall be the property of the Govt. And shall be handed over by the Contractor to Government free of cost at quarry site duly heaped at the spots indicated by the Engineer-in charge. The contractor will be entitled to the refund of royalty if any, paid by him for such quantity handed over to Govt. for which necessary certificate will be issued by Executive

Engineer as per usual procedure, if however, the Government does not required such surplus material the contractor may be allowed to dispose off or such surplus material elsewhere with prior written permission of Engineer-in-charge. Leaving off a quarry face or opening of a new quarry face shall be done only on the approval of the Engineer-in-charge.

- 25.8 Quarrying permission will have to be directly obtained by the Contractor, from the Collector of the District concerned for which purpose the department will render necessary assistance. All quarry fees, royalty charges, octroi duties, ground rent for staking material etc. and charges shall be paid directly to Revenue Department by the contractor as per rules in force. If it is not paid by contractor the same will be recovered from his bills.
- 25.9 The contractor will be permitted to erect at his own risk and cost at the quarry site if suitable vacant space of Government area is available for the purpose, his own structures for stores, offices etc. at places approved by the Engineer- in-charge. On completion of the work the contractor shall remove all the structures erected by him and restore the site to its original condition.
- 25.10 The Contractor shall not use any Sand in the quarry either for cultivation or for any other purpose except that required for breaking or stacking or transporting stones.

26 TRAFFIC REGULATION/ARRANGEMENT FOR TRAFFIC DURING CONSTRUCTION :-

Action for arrangement for traffic during construction will be taken by the Contractor as envisaged in the contract documents and spelt out in clause 112 of MORTH Specification for Road and Bridge Work (2001)

- 26.1 Unless separately provided for in the contract, the Contractor shall have to make all necessary arrangements for regulating traffic, day to night during the period of construction to the entire satisfaction of the Engineer. This includes the construction and maintenance of diversions if necessary. The contractor shall have to provide necessary caution board, barricades, flags, light and watchmen etc. So as to comply with the latest Motor Vehicles rules and Regulation and for Traffic Safety and he shall be responsible for all claims from accidents which may arise due to his

negligence whether in regulating the traffic or in stacking material on the roads, or due to any other reasons.

- 26.2 It is to be clearly understood that whatever work carried out by the Contractor for construction of diversion road including earthwork, W.B.M. bituminous surface dressing. R.C.C pipe drains etc. will be paid for only once. If due to flow of traffic, due to floods or due to any other cause, this diversion road and/or the R.C.C drain gets damaged it shall be repaired and maintained by the Contractor in good condition till completion of the whole work at his own expenses.

27. PROCUREMENT OF MATERIALS:-

- 27.1 Where suitable and approved P.W. Department's quarries exist, the Contractor or piece worker will be allowed if otherwise there is no objection to obtain the materials to the extent required for the work from the quarry. He will be however, liable to pay compensation. If any damage is caused to the quarry either deliberately or through negligence or for wastage of materials by himself or his staff or labour.
- 27.2 Where no suitable Government quarries exist or when the quantity of the material required cannot be obtained from a P.W. Department quarry the Contractor or pieceworker shall make his own arrangements to obtain the material from existing or a new quarry in Government waste land, private land or land belonging to other States or Talukas, etc. After opening the quarry but before starting collection the quarry shall be got approved by the Engineer-in- charge or his representatives. The Contractor or piece worker shall pay all royalty charges compensation etc. No claims or responsibility on account of any of obstructions caused to execution of the work by difficulties arising out of private owners of land will be entertained.
- 27.3 The rates in the tender include all incidental charges such as opening of a new quarry, opening out a new portion in an existing quarry, removing top soil and the unsuitable material, dewatering a quarry, cost of blasting powder and fuse, lift, lead, repairs to existing cart tracks, making new cart tracks, control charges, Central/State Government or Municipal taxes, Local Boards Cess, etc.
- 27.4 The rates in the tender are for the delivery of the approved material on road side properly stacked at the places specified by the Engineer-in-

charge and are inclusive of conveyance charges in respect of the leads and lifts. No claims on account of changes in lead will be entertained.

- 27.5 No material shall be removed from the land within the road boundary or from the land touching it without the written permission of the Engineer- in-charge of his authorized agent. If any materials is unauthorized obtained from such places the Contractor or piece worker shall have to make good the damages and pay such compensation, in addition as may be decided by the Executive Engineer and will have to stop further collection.
- 27.6 Any material that falls on any P.W.D. Road from the cart etc. during conveyance shall be immediately picked up and removed by the Contractor or piece worker, failing which it will be got removed Departmentally at his cost. No heap shall be left prior to checking even temporarily on the road surface or in any way so as to cause any obstruction or danger to the traffic. The Contractor or the piece worker shall be liable to pay for any claims of compensation etc. arising out of any accident, etc. Any such materials causing obstruction or danger etc. will be got removed departmentally at his cost and no claims for any loss or damage to the material, thus removed, will be entertained. The Contractor shall also be responsible for the damage or accident etc. arising out of any material that falls on the road or track, not in charge of the Department and shall attend to any complaint which may be received otherwise authorized by Engineer in writing. Collection and spreading shall not be carried out at the same time in one and the same mile or in to adjoin in Km. except with the return permission of the Executive Engineer.
- 27.7 Unless otherwise directed, the materials shall be collected in the following orders availability of space:-
- 1) Rubble (if included in tender)
 - 2) Metal
 - 3) Soft murum
 - 4) Hard murum
- Shall be stacked on the side opposite for petty repairs and shall be stacked on the side opposite to metal for new layer. Where metal for two layers has to be stacked as in the case of new roads, the metal for each layer shall be stacked on the opposite sides of the road.
- 27.8 All road material shall be examined and measured before it is spread. The labour for measurements (and check measurements where

ever carried out) shall be supplied by the contractor or place worker. Immediately after the measurements are recorded the stacks shall be marked by the contractor or piece worker by who wash or otherwise as may be directed by the Executive Engineer to prevent from any authorised tampering with the stacks. If the contractor or piece worker fails to attend the measurements after receiving the notice from Sub-divisional officer or his subordinate stating date and time of the intention to measure work, shall be measured never-the-less and no complaint in this respect will be entertained later on. If the contractor or piece worker fails to supply sufficient labour for the materials required at the time of measurements or check measurements, after due notice has been given to him, the expenses incurred on account of employing department labour or material etc. shall be charged against his account.

27.9 No deduction will made for voids.

27.10 The materials shall not be Stacked in place where it is liable to be damaged or lost due to traffic passing Over it, to be washed away by rain or floods, to be buried under the landslides etc. or slip down an embankment or hill side etc. No claims for any loss due to these and similar causes will be entertained.

27.11 Before stacking, the materials shall be free from all earth, rubbish vegetable matter and other extraneous substance and in the case of metal, screened to gauge, if so directed when ready. It shall be stacked entirely clear of the road way, on ground which has been cleaned of vegetation and leveled. On high banks, ghat roads etc. where it may not be practicable to stack it entirely clear of the roadway it may be stacked with the permission of the Engineer-in- charge on terms in such a way as to cause minimum danger and obstruction to the traffic or as may be directed by him.

27.12 The size of the stacks for materials other than rubble shall be 3.00m x 1 .50m x 0.80m or such other size as may be directed by the Engineer- in-charge and all but one stack in 200 M. shall be of the same uniform size and shall be uniformly distributed over whole lengths. One stack (at the end) in each 200 M may be of length different from the rest in order to adjust total quantity to be required but its width and height will be the same as those of the rest.

27.13 The Sub Divisional Officer shall supply the Contractor with statement showing furlong wise quantities that will be required and the order in

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which the collection is to be done. No materials in excess of requirements in that furlong shall be stacked. Any excess quantity shall be removed at the expenses of the Contractor or piece worker to where it is required before the material in that furlong is finally measured.

- 27.14 In slacking materials the deposition shall commence at the end of the KM fastest from the quarry and be carried continuously to the other end (unless otherwise directed by the Executive Engineer). Stacking in one 200 M shall be completed before it is started in another, unless directed otherwise, in writing by the Executive Engineer. Measurements of the materials stacked in a furlong will not be recorded until the full quantity required has been stacked.
- 27.15 All the materials such as asphalt, cement, steel etc. shall be procured by the contractor from approved Government Institutions or as directed by Engineer-in-charge only. The materials shall be brought at the site of work well in advance by the contractor. The contractor shall be responsible for all transportation and storage of the materials at the site and shall bear all the related costs. The Engineer shall be entitled at any time to inspect or reasonable assistance.(or such inspection as may be required)
- 27.16 After receiving bitumen, the authorized challan / gate pass should be obtained from the refinery mentioning the quantity of bitumen, rate of bitumen, date of delivery etc. And it should be handed over to the department for each consignment. Similarly the invoice of cement etc. shall be given to the authorized representative of the Engineer in -charge immediately on procurement of the materials.
- 27.17 The day to day record of the receipt / utility balance of material should be kept by the contractor in the form of register for each material like asphalt, cement, steel at plant site / site of work / store and the same will be checked by the Engineer-in-charge or authorized Engineer at anytime. This register shall be signed daily by the contractor or his representative and representative of Engineer-in-charge. The contractor shall submit periodically as well as on completion of work an account of all materials used by him on the work to the Engineer-in- charge.
- 27.18 While transportation of bouzer, transport pass should be obtained from those corporation / municipality through whose limits the bouzer is

passed and should be handed over to the authorized representative of the department.

- 27.19 The procurement of cement / steel etc. should be from authorized manufacturing company / institutions and vouchers regarding purchase thereof shall be submitted to the Engineer-in-charge. The material from any other source other than the approved institutions shall not be allowed unless written permission from the Executive Engineer is taken. In such cases certificate for test, quality shall be produced by the contractor and samples of materials shall be tested from any Government laboratory by the contractor at his cost and the test results be supplied to the department. The materials not conforming to the required standard shall be removed at once from the Site of work by the contractor at his own cost. All the materials such as asphalt, cement etc. required for use In the work shall be confirmed from the concerned 1000 of M.O.R.T.H. specifications. These materials shall be used on work by the contractor only after the tests thereof are found satisfactory. The responsibility of carrying out tests to the frequencies specified for each material shall rest with the Contractor. The R.C.C. pipes required for the work shall be procured from the Maharashtra Small Scale Industrial Development Corporation only. The payment towards the item of providing and fixing NP2 / NP3 / NP4 Pipes will be released only after the contractor submits the bills of MSSIDC to authenticate that the pipes have been purchased from the MSSIDC. No payment toward the item of providing and laying of pipe will be released in absence of the submission of requisite documents.
- 27.20 Any consignment or part of consignment of cement which is dilapidated in any way shall not be used In the works and shall be removed from the site by the contractor without charge to the employer.
- 27.21 Cement shall be transported and handed and stored on the site such a manner as to avoid deterioration, contamination. Each consignment shall be stored separately so that it may be readily identified and inspected. Cement shall be used in the sequence in which it's delivered at site.
- 27.22 The contractor shall prepare and maintain proper records on the site in respect of deliver, handling, storage and use of cement and these records shall be made available for inspection by the Engineer at all times.

- 27.23 The contractor shall construct at his own cost shed / sheds as per directions of the Engineer- in-charge for storing the material and providing double locking arrangements. (one lock of department and other of the Contractor) Materials shall be taken out from stores only in presence of authorized representative of the Engineer-in-charge. The store shed constructed on site shall be removed on completion of work. The contractor shall take all necessary steps to guard the materials brought by him.
- 27.24 Cement to be used in the works shall be any of the following types with the prior approval of the Engineer. Ordinary Portland cement conforming to IS 8 112 (latest edition) Ordinary / Portland cement conforming to IS 12269 (latest edition)
- 27.25 TMT FE-500 grade conforming to I.S. 1786 shall be used for reinforcement.
- 27.26 (a) Bulk bitumen of IS grade VG-30 grade shall be used. (b) Emulsion bitumen shall have to be used for tack coat.
- 27.27 Asphalt VG-30 grade confirming to IS 8887 of 1995 shall be used for tack coat.
- 27.28 The contractor shall make his own arrangement for the self custody of the materials brought by him on the site of work.
- 27.29 The charges for conveying of the material from the place of the purchase by the contractor to the site of work and the actual spot of work shall be entirely borne by the contractor, No claim on this account shall be entertained.
- 27.30 Register showing dispatch of bituminous load from the plant, vehicle No., time of dispatch, temperature at the time of dispatch etc. shall be kept in prescribed form at hot mix plant site. Similarly register showing the time, temperature of the mix at the site shall be kept the authorized representative of the contractor shall fill both these registers. These shall be signed by the Contractor everyday in token of acceptance The maintenance of these registers does not absolve the contractor of his contractual obligation towards quality of the work.
- 27.31 The contractor should ensure that all safety precautions are observed by the labours while handling the materials and precautions. For their labour at the cost of the contractor and the contractor will bear all the expenses

compensation etc. If any incident occurs to the labour etc. no claim in this regard what-so-ever shall be entertained and the decision of the Department will be final and conclusive.

27.32 In case the materials become surplus owing to the change in the design of the work after the materials are brought by the contractor, no claim in this regard will be entertained and the contractor will be required to take away such materials from the site.

27.33 The contractor should arrange for weighment of the bouzer if desired by the Engineer in charge. The weighment shall be done in the presence of representative of the department at the cost of the contractor.

27.34 The weight of the steel bars used on the work will be calculated on the basis of standard weight per unit length vide IS. 1732. No wastage of steel will be considered at all. Cut pieces of the steel irrespective of the length will be the property of the contractor and no claim whatsoever in this regard shall be entertained. The consignment of the steel brought by the contractor having weight less than the standard weight per unit length of the bar as mentioned above will not be accepted. For this purpose random sample will be tested by the Executive Engineer and the decision of the Executive Engineer shall be binding on the contractor, if the steel received is over weight (more than standard weight per running meter length) no extra payment will be made and no claim in this regard whatsoever shall be entertained

27.35 No claims on account of cement or steel rods used for ancillary works on Site of- work shall be entertained.

27.36 All the materials to be brought on site shall be brought only on working days and in presence of an authorized representative of the Engineer-in - charge.

27.37 All the materials such as cement, mild steel, H.Y.S.D. Bars, TMT Bars etc. required for execution of work shall be brought by the contractor at his own cost.

- 27.38 The contractor shall maintain the record of these materials (cement, steel etc.) in the prescribed proforma and registers as directed by Engineer-in-charge. The sample of prescribed proforma is attached at the end. These registers shall be signed by both the contractors and representative of the Engineer-in-charge. These registers shall be made available for inspection, verification for the Department as and when required. These registers shall be in the custody of Department and shall be maintained by the Department.
- 27.39 The material required only for this work shall be kept in the go-down at site. No material shall be shifted outside of the go-down site except for the work for which this agreement is entered without prior approval of the Engineer-in-charge.
- 27.40 The materials i.e. cement, steel etc. brought on the work site shall be accompanied with necessary company/manufacturing firm's test certificates. In addition these materials shall be tested as per frequency prescribed by the Department and the cost of such testing shall be borne by the contractor. If the test results are satisfactory, then and then only the material shall be allowed to be used on the work. If the test results are not as per standards prescribed, these materials shall be immediately removed from the work site at the contractor's cost. In case of cement, if so requested by the contractor in writing, material shall be allowed to be used before receipt, of test results but this will be entirely at the risk and cost of the contractor.
- 27.41 The contractor shall produce sufficient documentary evidence i.e. bill for the purchase of materials brought on the work site at once if so required by the department.
- 27.42 All these materials i.e. cement, steel etc. shall be protected from any damages rains etc. by the contractors at his own cost.
- 27.43 The contractor will have to erect temporary shed of approved specifications for storing of above materials at work site at contractor's cost having double locking arrangements (By double lock it/s meant that go-down shall always be locked by two locks, one lock being owned and operated by contractor and other by Engineer-in charge or his authorized representative) and the door shall be open able only after both locks are opened.
- 27.44 If required, the weighment of cement bags / steel etc. brought by the contractor shall be carried out at his own cost.

27.45 The contractor shall not use cement and other material for the item to be executed outside the scope of this contract except for such ancillary small items as are connected and absolutely necessary for this work as may be decided by the Engineer-in-charge.

27.46 The Government shall not be responsible for the loss in cement and steel during transit to work site. The cement brought by the contractor at the work site store shall mean 50 Kilogram equivalent to 0.0347 cubic meter per bag by weight. The rate quoted should correspond to this method of reckoning. In case of ordinary I Controlled concrete, if cements found short, the shortage I shortages wilt be made good by the contractor at his cost.

27.47 **Special Condition for B.T. work :**

In respect of Black Top Work, 15% (Fifteen Percent) payment of Black Top in a particular Km. shall be retained till completion of side beams / C.D. Works etc. in that km. After completion of other items satisfactorily, the withheld payment will be released finally.

27.48 For Grade -I /Grade-II / Grade -III / WBM and for BUSG work metal shall be supplied at site only after screening it on “mechanical vibratory screening unit”. The special “mechanical vibratory screening unit” arrangement shall consist of main input hopper to receive raw metal, conveyor belt to transport it to the “mechanical vibratory screening unit”. The “mechanical vibratory screening unit” shall have required number of trays, sieves/decks as directed by the Engineering in charge. The output of “mechanical vibratory screening unit” shall be conveyed to “storage Unit” where metal of different sizes, shall be stored separately. Metal so supplied shall undergo all the tests as per the specifications. As a input to the main input hopper, contractor may use hand broken metal or output of primary crusher / cone crusher of size or equivalent to not less than 24“x18” The metal so supplied from the “mechanical Vibratory screening unit” at site shall not exempt the contractor from carrying out tests as specified in the specifications.

28. MISCELLANEOUS:-

28.1 Rate shall be inclusive of Sales Tax, General Tax and other taxes etc.

28.2 For providing electric wiring or water lines etc. recesses shall be provided if necessary, through walls, slabs, beams etc. and later on

refilled up with bricks or stone chipping, cement mortar without any extra cost.

- 28.3 In case it becomes necessary for the due fulfillment of contract for the Contractor to occupy land outside the Dept. Limits, the Contractor will have to make his own arrangements with the land owners and to pay such rents if any are payable as mutually agreed between them.

The Department will afford the Contractor all the reasonable assistance to enable him to obtain Govt. Land for Such purpose on usual terms and conditions as per rules of Government.

- 28.4 The special provision in detailed specifications or wording of any item shall gain precedence over corresponding contradictory provision (if any) in the standard specifications or P.W.D. Hand book where reference to such specifications is given without reproducing the details in contract.

- 28.5 Suitable separating Barricades and enclosures shall be provided to separate material brought by contractor and material issued by Government to contractor under **Schedule "A"** Same applies for the material obtained from different sources of supply.

- 28.6 It is presumed that the Contractor has gone carefully through the Standard Specifications of P.W.D. Hand Books and the Schedule of Rate of the Division and studied the site condition before arriving at rates quoted by him. Decision of the Engineer-in-charge shall .be final as regards interpretation of specifications.

- 28.7 The stocking storage of construction material at site shall be in such a manner as to prevent deterioration or intrusion of foreign matter and to ensure the preservation of their quality, properties and fitness of the work. Suitable precautions shall be taken by the Contractor to protect, the material against atmospheric actions, fire and other hazards. The materials likely to be carried away by wind shall be stored in suitable stores or with suitable barricades and where there is likely hood of subsidence of soil, such heavy materials shall be stored on approved platform.

- 28.8 For Road and Bridge works, the contractor shall in addition to the specifications cited here, comply with requirements of relevant I.R.C. Code of Practice.

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- 28.9 The Contractor shall be responsible for making good the damages done to the existing property during construction by his men.
- 28.10 If it is found necessary from safety point of view to test any part of the structure, the test shall be carried out by the Contractor with the help of the Department at his own cost.
- 28.11 The contractor shall provide, maintain, furnish and remove on completion, temporary shed for office on work site for the use of Executive Engineer's representative.
- 28.12 Defective work is liable to be rejected at any stage. The contractor, on no account can refuse to rectify the defects merely on reasons that further work has been carried out No extra payment shall be made for rectification.
- 28.13 General directions or detailed description of work, materials and items coverage of rates given in the specification are not necessarily repeated in the Bill of Quantities. Reference is however, drawn to the appropriate section clause(s) of the General Specifications in accordance with which the work is to be carried out.
- 28.14 In the absence of specific directions to the contractor, the rates and prices inserted in the items are to be considered as the full inclusive rates and prices for the finished work described there under and are to cover all labour materials, wastage, temporary work, plant, overhead charges and profits, as well as the general liabilities, obligations and risks arising out of the General conditions of contract.
- 28.15 All measurements will made in accordance with the methods indicated in the specification, and specification read in conjunction with the General Conditions of Contract.
- 28.16 The details shown on drawings and all other information pertaining to the work shall be treated and provisional only and are liable to variation as found necessary while preparing working drawing which will be supplied by the Government during execution. The contractor shall not, on account of such variation be entitled to any increase over the ones quoted in the tender which are on quantity basis.
- 28.17 The recoveries if any from contractor will be effected as arrears of land revenue through the Collector of the District.

28.18 Protection of underground telephone cable and aerial telephone wires and poles, transmission towers, electrical cables, and water supplying lines. It will therefore be the responsibility of the contractor to protect them carefully all such cases should be brought to the notice of the Engineer-in-charge by the contractor and also the concerned department, any damage what so ever done to these cables and pipe lines by the contractor shall be made good by him at his cost.

28.19 Public Utilities:

Action in respect of public utilities will be taken by the Contractor as envisaged in Clause 110 of Ministry's Specifications for Road and Bridge work (2nd Revision).

29. PAYMENTS AND MEASUREMENTS:-

29.1 PAYMENTS:

The contractor must understand clearly that the rates quoted are for completed work and include all cost due to labour, scaffolding, plant, machinery, supervision, power, royalties, taxes etc. and should also include all expenses to cover the cost of height work as and when required and no claim for additional payment beyond the prices or rates quoted will be entertained. The mode of measurement has been indicated in the specifications.

If there is any ambiguity or doubt in this respect, the decision of Superintending Engineer will be final.

29.2 Two payments in a month will be granted by the Engineer-in-charge for the progress is satisfactory, and shall be made as per, accepted payment schedule.

29.3 Ground levels will be taken by the usual method and by Departmental staff in presence of contractor's representative. Required labour etc. for this shall be supplied by the contractor, in case of slushy portion, the ground levels shall be taken by erecting the leveling staff on wooden plank (0.5 x 0.5metre, 2.5 cm. thick) without claiming extra for cost of plank or by any other mutually agreed method.

29.4 Contractor can have copies of the measurements and of the bills paid to him at his own cost and his own responsibility.

29.5 The payment of carpet shall be made only after completion of seal coat.

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29.6 10% amount of premix carpet and seal coat shall be withheld from running account bill till the completion of side shoulders.

30. MAINTENANCE :

30 (i) The Contractor shall maintain the finished surface of the road for a period mentioned in **Clause No.20** after the completion of work without any extra cost to Government irrespective of the designs, standards and specifications and the actual traffic etc. The Contractor shall get the pot holes filled up with asphalt mix materials and keep the road surface in good condition throughout the year. 5% amount of the total work done shall be recovered from running account bills and shall be withheld for period mentioned in **Clause No.20** from the date of actual completion of work as maintenance charges of maintaining and keeping the road in good condition. This 5% amount withheld towards maintenance charges shall be allowed to be replaced with bank guarantee or other recognised forms at intermediate stage, if so desired in writing. This maintenance charges shall be in addition to security deposit.

30 (ii) On completion of the work in all respects, necessary certificate will be issued by the concerned Executive Engineer and the defects liability period will be counted from the date of issue of such certificates.

30(iii) It will be responsibility of the contracting Agency to maintain total road length under work portion of this contract Agreement in good condition from the date of issue of work orders, till completion of defect liability period as per Clause 20 and this shall be treated as part of total scope of this contract Agreement.

In case the contractor fails to maintain road length properly including rectification of the defects pointed out by the department within a period of 7 days from the date of written notice by the Engineer-in-charge rectification / repairs to such defects will be carried out by the department at contractor's risk and cost. The expenditure incurred on such rectification work shall be recovered from the amount withheld as per Clause 30(i) respectively.

30(iv) All damages during execution shall be made good by the Contractor at his cost. He will be responsible for any damages to the road surface including B.T. surface in rainy seasons and during

construction and guaranteed maintenance period and no separate payment will be made for restoring such damages.

"Any defects noticed in finished black topped surface such as pot holes, damages etc. within a period mentioned in Clause 20, after completion of work (including Monsoon) will have to be repaired by the Contractor at his own cost."

30 (v) Defective work is liable to be rejected at any stage. The Contractor on no account can refuse to rectify the defects merely on reasons that further work has been carried out. No extra payment shall be made for such rectification.

31. FINAL BILL:

31.1 The contractor should submit final bill within one month after completion of the work and the same will be paid within 5 months if it is in order. Disputed items and claims, if any shall be excluded from the bill and settled separately later on.

31.2 Bills for extra work or for any claim shall be paid separately apart from the interim bills for the main work. The payment of bills for the main work shall not be withheld for want of decision on the extras or claims not covered in the stipulations of the contact.

31.3 Claims for extra work shall be registered within 30 days of occurrence of the event. However, bills for these claims including supporting data details may be submitted subsequently at his own cost.

32. PRELIMINARY ARRANGEMENTS: -

32.1 The Contractor if necessary construct temporary roads and maintain these in proper condition till the completion of the work at his own cost. If necessary, he shall also, at his own expenses make necessary arrangements for acquisition of land required by him in connection with the execution of the work.

32.2 The contractor shall have to makes at his own cost all preliminary arrangements for labour, water electricity and materials etc. immediately after getting the work order. No claim for any extra payment or application

for extension of time on the grounds of difficulty in connection with the above matter, will be entertained,

- 32.3 The contractor shall at his own expenses, engage watchmen for guarding the materials and plant and machinery and the work during-day and night against any pilferage of damages and also for prohibiting trespassers or damage to them.
- 32.4 The contractor shall have to make his own arrangement for water required for any purpose on the work.

33. INSPECTION :-

- 33.1 The contractor shall inform the Engineer-in-charge in writing when any portion of the work is ready for inspection giving him sufficient notice to enable him to inspection to inspect the same without affecting the further progress of the work. The work shall not be considered to have been completed in accordance with the terms of the contract until the Engineer-in- charge shall have certified in writing to that effect. No approval of materials or workmanship or approval of part of the work during the progress of execution shall bind the Engineer-in- charge or in any way affect him even to reject the work which is alleged to be completed and to suspend the issue of his certificate of completion until such alterations and modifications or reconstruction have been effected at the cost of the contractor as shall enable him to certify that the work has been completed to his satisfaction.
- 33.2 The contractor shall provide at his cost necessary ladders and such arrangements as to provide necessary facilities and assistance for proper inspection of all parts of the work at his own cost.
- 33.3 The contractor after completion of work shall have to clean the site, of all debris and remove all unused materials other than those supplied by the Department and all plant and machinery, equipment, tools etc. belonging to him within one month from the date of completion of the work, or otherwise the same shall be removed by the Department at his cost and the contractor shall not be entitled for payment of any compensation for the same.

34. ACCIDENT :-

In the event of an accident involving serious injuries or damages to human life or death of any of his employees and or labourers or tress passers, the

same will be reported within 24 hours of the occurrence to the Executive Engineer and the Commissioner of workmen's compensation.

35. PLANT:-

All constructional plant, provided by the contractor shall when brought on to the site be deemed to be exclusively intended for the construction of this work and the contractor shall not remove the same or any part thereof (Say for the purpose of moving it from one part of the site to another or the repairs etc.) without the consent in writing of the Engineer-in-charge which shall not be unreasonably with-held. The concreting shall be done by the ready mix batch type concrete mixer diesel or electrically operated with a minimum size of 200 litres with automatic water measuring system and integral weigher (Hydraulic or pneumatic type one). This RMC Plant may be of portable type.

36. EXCEPTED RISKS :-

36.1 The contractor shall be under no liability whatsoever by way indemnity or otherwise for or in respect of destruction of-or damage to the works (save work condemned under the provisions of specifications and conditions of this tender prior to the occurrence of any excepted risk hereinafter mentioned) or temporary works or to property whether of the Department or third parties or for or in respect of injury or loss of life which is the consequence whatever direct or indirect, were hostilities (whether were to declared or not) invasion, act of foreign enemies, rebellion, revolution, insurrection or military of usurped power. Civil war or riot, commotion or disorder otherwise than among the contractor's own employees or his piece worker and sub agencies (hereinafter comprehensively referred to as "The said excepted risks") and the department shall indemnify and save harmless the contractor against and' from the same and against and from all claims, demands proceedings, damages, costs charges and expenses, whatsoever arising there out or in connection therewith and shall compensate the contractor for any loss of or damage to property of the contractor used for intended to be used / or the purpose of the works and laying at site of work and occasioned either directly or indirectly by the said excepted risks.

36.2 If the works or temporary works or any materials (whether for the former or the later brought to site shall sustain destruction or damages by reasons of any of the said excepted risks, the contractor shall be entitled

payment for any permanent works and for any materials so destroyed or damaged and shall be paid by the department the cost of making good any such destruction or damages whatever to the works or temporary works and for replacing or making good such materials so far as may be necessary for the completion of the works on a prime costs basis as the Engineer-In Charge may certify to be reasonable. The contractor shall lodge his claim, in writing, supported by Engineer-in-charge immediately, but not later than 30 days of such occurrence of damage to works by excepted risk

- 36.3 Destruction, damage injury or loss caused by the explosion or impact whenever and wherever occurring of any mine bomb, shell, grenade or other projectile missile or ammunition or explosive or war resulting from action described in above shall be deemed to be a consequence of the. said excepted Risk.

37. ADDITIONAL WORKS SPECIFICATIONS:-

- 37.1 The whole work shall be carried out strictly in accordance with the approved detailed drawing (unless otherwise directed) description of the items, detailed specification of the MORT&H for Bridge and Road Works Illrd revision 2013, standard Specification book lind edition (with Indian Standard specification indicated therein) of P.W. Department, Government of Maharashtra subject to the additional specification given for the relevant items and in the best workmen like manner.
- 37.2 While adopting the relevant number and pages for different items of the MORT&H Specifications for Bridges and Road Works. Illrd revision 2013 Standard Specification Book, due care has been taken to indicate correct number and page for the various items. However if for some reasons or other it is noticed that the specification numbers and pages quoted are not pertinent, the contractor is bound to carry out the work in accordance with the correct relevant specifications for the item or items from the standard specification Book. After taking into account the description of the items, scope and spirit of the work.
- 37.3 It is to be definitely and clearly understood that the specifications stipulated shall be rigidly enforced and no relaxations shall be allowed. Extra charges or claims in respect of extra works shall not be

entertained unless they are clearly outside the scope of the item and its specifications to which they relate or unless such works are ordered in writing by the Executive Engineer and claimed for in specified manner before the same is taken in hand.

38. QUALITY ASSURANCE AND MAINTENANCE:-

38.1. The contractor to ensure the specified quality of work which will also include necessary surveys, temporary works etc. The contractor shall prepare a quality assurance plan and get the same approved from the Engineer-in-charge within one month from the date of work order. The contractor shall submit an organization chart of his technical personnel to be deployed on the work along with their' qualification, job descriptions defining the functions of reporting, supervising inspecting and approving. The contractor shall also submit a list of tools, equipment and the machinery and instruments which he proposes to use for the construction and for testing in the field and or in the laboratory and monitoring. The contractor shall modify/supplement the organization chart and the list of machinery, equipment etc. as per the directions by the Superintending Engineer Engineer-In-Charge and shall deploy the personnel and equipment on the field as per the approved chart and list respectively. The contractor shall submit written method statements detailing his exact proposals of execution of the work in accordance with the specification. He will have to get those approved from the Engineer-in-charge. The quality of the work shall be properly documented through certificate, records, check-lists and logbooks of results etc.

Such records shall be compiled from the beginning of the work and be continuously update and supplemented and this will be the responsibility of the contractor. The forms should be got approved from the Executive Engineer-in-charge.

38.2 Where the work is to be done on lump sum basis on contractor's design the contractor shall also prepare and submit a maintenance manual giving procedure for maintenance, with the periodicity of maintenance works including inspections, tools and equipment to be used, means of accessibility for all parts of the structure. The maintenance manual shall be approved by the Engineer-In-Charge. He shall also include the manual the specifications for maintenance work that would be

appropriate. For his design and technique of construction. This manual shall be submitted within the contract period.

39. DAY-TO-DAY QUALITY CONTROL OPERATIONS:

The day-to-day controls to be exercised by the Contractor and the Engineer are enumerated in the below paragraphs:-

i. Alignment and Level Control.

- a) The Contractor should locate the center-line of the road from the pegs, pillars or preference points fixed during the location survey and form the information. furnished in the Contract drawings. Any discrepancy between the reference points on the ground and those on the drawings should immediately be brought to the notice of the Engineer for reconciliation.
- b) Based on the approved center-line the Contractor should set up batter pegs (to delineate the limits of embankment/cutting and cleaning stakes to delineate limit of cleaning and grubbing and have these got checked and approved by the Engineer.
- c) The contractor should check the reduced levels of bench marks setup along the alignment.
Any discrepancy in the reduced levels of those at site and as indicated in the drawings should immediately be brought to the notice of the Engineer of reconciliation, the contractor should re-establish those bench marks which are found missing at site, and should establish additional bench marks as needed ensuring effective level control.
- d) The contractor shall be responsible for the true and proper setting out of the works in relation to the original survey points lines and levels of reference given by Engineer in writing if at any time during the progress of the works, any error shall appear or arise in the position, levels dimensions or alignment any part of the works, the contractor on being required to do so by the Engineer, shall at his own cost rectify the error to the satisfaction of the Engineer, unless such error is based on incorrect data supplied in writing by the Engineer.
- e) The contractor shall carefully protect and prepare all bench marks, reference pillars and pegs used in setting out the works till final take over by the Engineer.

ii. Sub Grade

- a) Specific borrow areas having soil satisfying the requirements of specifications and specified strength criteria shall be identified for use in sub grade and got approved by the Engineer based on tests on borrow material for proctor modified proctor density and CBR.
- b) In situ density and CBR of the constructed sub grade shall be checked and got approved by the Engineer before proceedings on with the next pavement layer.
- c) The soil used in actual construction of sub grade shall be remoulded at density referred in sub-para (b) above at placement moisture content and checked for 4 days soaked and un-soaked CBRA set of 3 specimens shall be collected from each 3000 M³ area of the sub grade i.e. top of 0.5 m of embankment for CBR test.
- d) In case of any appreciable variation of inbuilt sub grade characteristics form the designed ones. the pavement design shall be reviewed to match the inbuilt characteristics of the sub grade.

iii. Sub-base

- a) The source of supply of material shall be inspected, tested and got approved by the Engineer before any Material is delivered to the site of work(s).
- b) Job-mix formula falling within the specified limits where applicable, shall be got approved by the Engineer based on test results thereof.
- c) Samples of materials from the laid sub-base shall be tested for gradation proctor density, PL and CBR
- d) Field compaction shall be checked and got approved by the Engineer before proceeding with the work on the next pavement layer.
- e) In case of any appreciable variation of inbuilt sub base characteristics from the designed ones, the pavement design shall be reviewed to match the inbuilt characteristics of the sub base.

vii. Shoulders

- a) Checking for the quality of shoulder materials including gradation shall be done.
- b) Field compaction shall be checked at site on the compacted layer.
- c) Checking for the cross fall built shall be done.

viii. Culverts and other Appurtenances

- a) Lines, levels and quality of the foundation should be checked. b) In case of pipe culverts
 - i) The quality of the pipes should be checked. For BIS (formerly ISI) marked pipes, manufacturer's certificate is acceptable, for other, the

contractor shall demonstrate the strength capability of pipes through theists either at the place of manufacture or at site of works.

- ii) The quality of materials used for pipe bedding should be checked. Invert level, smoothness of the pipeline and proper sealing of joints should be checked prior to back filling.

40.1 Submission of monthly bill in electronic form:

1. As per clause 10 of this B-1 contract, it is responsibility of the contractor to submit the bill monthly to the Engineer in charge.
2. To discharge this responsibility the contractor shall submit the bill in electronic form.
3. In doing so he shall use e-copy of tender paper.
4. In support of the bills, required measurements, drawings, quality control reports (field lab and VQCC lab as per clause 24 of additional General condition), site supervision data (SCADA) shall be submitted in electronic form, the data so submitted shall have a facility to tightly integrate it with the contract conditions, provisions in the Maharashtra Public Works manual, Maharashtra Public Works Account Code (updated to date of submission of this tender) and current general engineering practices (issued through various Government Resolutions, Government Circulars, Chief Engineer's Circulars etc. issued upto date of submission of this tender) followed in Public Works Department.
5. The submission of e-bill shall be in the web based format.
6. The offer of contractor shall be inclusive of all. He shall not be paid separately, his offer shall be inclusive of all cost required for submitting bill in e-format mentioned in this Para and also...
 - a. The cost of procuring, establishing, running, operating and maintaining web based system for submission and approval of bill, with all instrumentation / automation / services required to submit / approve / store in PWD data base.
 - b. Web connectivity to all locations where bill and its relevant documents required for the bill are being acquired / prepared, transmitted, processed, stored and retrieved with minimum speed of 2 MBPS and 100% availability (Including SCADA). The contractor shall provide the

web application in such a manner that it shall first update the above data in real time on PWD's works monitoring e- governance.

- c. Governance web application automatically. The contractor shall put his request to Engineer in charge to get access to the PWD e-governance web application.
- d. Web based application including computer software, hardware etc. to transmit, process, store and retrieve the data in the forms and formats as prescribed by the Engineer in charge.
- e. Arrangement for security of bill and its relevant documents, Disaster recovery arrangements shall be as per prevailing I.T. Industry practice, during the construction period and up to defect liability period (DLP). Handing over the data on the web base server after DLP in electronic form as instructed by Engineer in charge.
- f. Calibration of all accessories / attachment related to bill shall be as per the specification.
- g. Web based application to monitor the schedule of calibration of all related attachment / accessories related of bill and its relevant documents. The invalidity of calibration shall lead to non-acceptance of work or measurement and the contractor shall no be paid such non-accepted work or measurements.
- h. Submission of printed and authenticated reports to the Engineer in charge as and when required.
- i. Point (a) to (g) above shall arranged and maintained during period and defect liability period.
- j. Cost includes rectification, fine tuning, corrections, additions and alterations to the system to the satisfaction of Engineer in charge.
- k. All data generated as per this special condition of contract shall be the property of PWD.

40.2 The contractor shall make all necessary arrangement required under clause 34.1 to _____ above (Supervising control and data acquisition for

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concrete work / all cement works / masonry / plaster / testing equipment's items, submission and approval of bill/s) well in advance before starting of the related items of works and activities. All necessary arrangements so made shall be offered for inspection to Engineer in charges / PMC / Officer appointed by the Engineer in charge on month prior to the start of the related items of work. Changes if any after his inspection suggested by the Engineer in charge / PMC / Officer appointed by the engineer in charge shall be carried out at no extra cost and within the period of three days. A fresh request for inspection of Engineer in charge/ PMC / Officer appointed by the Engineer in charge after such rectifications shall be requested by the contractor and final approval to the arrangements of SCADA and submission and approval of bill/s shall be obtained.

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DRAWINGS**CONTRACT DRAWINGS:**

The contract drawings provided for tendering purpose with the tender documents shall be used as reference only. Contractor should visualise the nature of type of work contemplated and to ensure that the rates and prices quoted by him in the bill of quantities take due consideration of the complexities of work involved during actual execution / construction as experienced Contractors in the field.

The tendered rates / prices for the work shall be deemed to include the cost of preparation, supply and delivery of all necessary drawings, prints, tracings and negatives which the Contractor is required to provide in accordance with the contract.

DOCUMENTATION:

If so ordered by the Engineer-in-charge the Contractor will prepare drawings of the work at constructed and will supply original and three copies to the Engineer who will verify and certify these drawings. Final as constructed drawings shall then be prepared by the Contractor and supplied in triplicate along with a micro film of the same to the Engineer for record and reference purposes at the Contractor's cost.

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SCHEDULE A

NAME OF WORK : Providing, fixing, installation & commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backou & smart intelligent interface connectivity etc. complete at At Forbey and Pickup Dam of Bhira Hydro Electric Project.

Schedule showing (approximately) the materials to be supplied from the Department Stores for Work contracted to be executed and preliminary and ancillary works and the rates at which they are to be charged for.

S.N.	Particulars	Quantity	Rate (Rs) in		Credit Amount (Rs)	Place of Delivery
			Figures	Words		
1	2	3	4	5	6	7
			Not applicable			

Note-

- 1) The person or firm submitting the tender should see that the rates in the above schedule are filled up by the Executive Engineer In charge on the issue of the form prior to the submission of the tender.
- 2) The rates mentioned in Schedule "A" are inclusive of all taxes and storage charges.

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SCHEDULE 'B' AND SPECIFICATION
Memorandum showing items of work to be carried out

SCHEDULE – B

Name of Work =

Providing, fixing, installation, commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backup and smart intelligent interface connectivity etc. complete etc. complete at Bhira Pick up wear & Rawalje Dam.

Qty For Pick-up wear	Qty For Forbay Dam	Total Qty	Items	Rate	Rate in Words	Unit	Amount
1.00	1.00	2.00	Providing, Fixing, Installation, Commissioning, Testing, Training & Maintaining Latest advanced Digital Transmission Control Protocol based Infrared, stationary Security Monitoring & Supervision devices with Original Equipment Manufacturer's (OEM) of branded companies along with CE, BIS & FCC certification for monitoring & supervision of entrance & exit gates / roads & essential locations on dam site for security of different locations of dam site etc. complete.	Rs.33,500.00	Rupees Thirty Three Thousand Five Hundred Only	Each	Rs.67,000.00
			Item no. 2				
1.00	2.00	3.00	Providing, Fixing, Installation of Latest advanced Digital Transmission Control Protocol based Remotely controllable high speed mini dome outdoor Pantiltzoom Security Monitoring & Supervision devices with Original Equipment Manufacturer's (OEM) of Specified branded companies along with CE, BIS & FCC certification along & Weatherproof & Vandal proof housing for monitoring & supervision of complete site for overall security of site etc. Complete.	Rs.88,500.00	Rupees Eighty Eight Thousand Five Hundred Only	Each	Rs.2,65,500.00

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Qty For Pick-up wear	Qty For Forbay Dam	Total Qty	Items	Rate	Rate in Words	Unit	Amount
			Item no. 3				
0	2.00	2.00	Providing, Fixing, Installation of Latest advanced Digital Transmission Control Protocol based 8Ch Network Video Recorder with Original Equipment Manufacturer's (OEM) of Matrix/Uniview/Wbox branded companies along with CE, BIS & FCC certification etc. complete	Rs.53,500.00	Rupees Fifty Three Thousand Five Hundred Only	Each	Rs.1,07,000.00
			Item no. 4				
0	8.00	8.00	Providing, Fixing, Installation, Commissioning, Testing, Training & Maintaining of high quality, latest & advance Recording & Storage Unit storage capacity of minimum 1 TB (Tetra Byte) etc. Complete.	Rs.4,500.00	Rupees Four Thousand Five Hundred Only	TB	Rs.36,000.00
			Item no. 5				
1.00	1.00	2.00	Providing, fixing & installation of high quality, latest & advance Video Secure Outdoor Weatherproof Heavy Duty Aluminium Housing Mount Enclosure along with brackets & clamps etc. Complete.	Rs.9,500.00	Rupees Nine Thousand Five Hundred Only	Each	Rs.19,000.00
			Item no. 6				
8.00	6.00	14.00	Providing, fixing & installation of high quality, latest & advance Industrial Grade, durable 5 V , 12 V , 24 V Dc to Buck & Boost Regulated Voltage Power Supply etc. Complete.	Rs.7,500.00	Rupees Seven Thousand Five Hundred Only	Each	Rs.1,05,000.00
			Item no. 7				
15.00	12.00	27.00	Splicing (making joints of optical fibre cable) of FR grade pvc armoured multimode armoured multimode optical fibre cable with the help Splicing machine etc. Complete.	Rs.5,100.00	Rupees Five Thousand One Hundred Only	Each	Rs.1,37,700.00
			Item no. 8				

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Qty For Pick-up wear	Qty For Forbay Dam	Total Qty	Items	Rate	Rate in Words	Unit	Amount
2.00	3.00	5.00	Supplying and erecting 30Ah Lifepo4 (Lithium Ion) battery etc. Complete.	Rs.29,500.00	Rupees Twenty Nine Thousand Five Hundred Only	Each	Rs.1,47,500.00
			Item no.	9			
6.00	10.00	16.00	Supplying and erecting 80Ah Lifepo4 (Lithium Ion) battery etc. Complete.	Rs.79,500.00	Rupees Seventy Nine Thousand Five Hundred Only	Each	Rs.12,72,000.00
			Item no.	10			
11.00	8.00	19.00	Providing, fixing & installation of high quality, latest & advance MPPT Solar Charge Controller etc. Complete	Rs.18,500.00	Rupees Eighteen Thousand Five Hundred Only	Each	Rs.3,51,500.00
			Item no.	11			
20.00	15.00	35.00	Providing, fixing & installation of class A, water resistant & durable, Ingress Protection 67, BIS compliant Solar panel etc. Complete	Rs.21,500.00	Rupees Twenty One Thousand Five Hundred Only	Each	Rs.7,52,500.00
			Item no.	12			
20.00	15.00	35.00	Providing, fixing & installation of water resistant, durable & weatherproof Solar stand etc. Complete.	Rs.8,500.00	Rupees Eight Thousand Five Hundred Only	Each	Rs.2,97,500.00
			Item no.	13			
0	1.00	1.00	Supply, Installation, Testing, Integration & Commissioning of 49" LCD monitor at Conf. Room for display of total water system (Online)	Rs.87,250.26	Rupees Eighty Seven Thousand Two Hundred Fifty and Twenty Six Paise Only	Each	Rs.87,250.26
			Item no.	14			

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Qty For Pick-up wear	Qty For Forbay Dam	Total Qty	Items	Rate	Rate in Words	Unit	Amount
2.00	4.00	6.00	Supplying and fixing 9U Hybrid IP66 outdoor mount server rack with pole mount bracket (Dimension-DxWxH - 500x550x450 mm) as per specification no. WG-NAS/RAK	Rs.49,241.80	Rupees Forty Nine Thousand Two Hundred Forty and Eighty Paise Only	Each	Rs.2,95,444.80
			Item no.	15			
0	2.00	2.00	Supplying and fixing 24 U floor mount rack (Dimension-DxWxH – 800x600x1265 mm) as per specification No. WG-NAS/RAK	Rs.57,883.20	Rupees Fifty Seven Thousand Eight Hundred Eighty Three and Twenty Paise Only	Each	Rs.1,15,766.40
			Item no.	16			
12.00	14.00	26.00	Providing, Fixing, Installation of high quality, latest & advance lan to media convertor Connection device with metal cover etc. Complete.	Rs.5,300.00	Rupees Five Thousand Three Hundred Only	Each	Rs.1,37,800.00
			Item no.	17			
2.00	2.00	4.00	Supplying, fixing, and configuring modularised multi-service router 802.11/a/n/ac unified Wave 2.5 GHz, with RJ-45 port, supporting 1 to 13 channels for 2.4 GHz, with unified wireless access point complete	Rs.2,16,206.40	Rupees Two Lacs Sixteen Thousand Two Hundred Six and Forty Paise Only	Each	Rs.8,64,825.60
			Item no.	18			
114.00	100.00	214.00	Supplying and installing LSZH sheathed HDPE insulated copper cat-6A cable suitable for networking compliant with ANSI/TIA-568.2-D standards in provided conduit/casing-n-capping as per specification no. WG-ELVC/NC	Rs.102.00	Rupees One Hundred Two Only	Mtr	Rs.21,828.00
			Item no.	19			

Contractor

No. of Corrections

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Qty For Pick-up wear	Qty For Forbay Dam	Total Qty	Items	Rate	Rate in Words	Unit	Amount
12.00	16.00	28.00	Supplying and fixing 2 m 24 AWG multi stranded UTP patch cord with RJ-45 factory crimped connector of cat 6A type compliant ANSI/TIA-568.2-D standards in position as per specification no. WG-ELVC/PC	Rs.574.60	Rupees Five Hundred Seventy Three and Sixty Paise Only	Each	Rs.16,060.80
			Item no.	20			
3.00	6.00	9.00	Supplying, fixing, and configuring 8-ports managed gigabit, layer-2 switch, 10/100/1000 base-T, PoE smart switch plus 2 SFP erected in provided rack compliant with IEEE 802.3 standards complete.	Rs.29,749.20	Rupees Twenty Nine Thousand Seven Hundred Forty Nine and Twenty Paise Only	Each	Rs.2,67,742.80
			Item no.	21			
0	8.00	8.00	Supplying, fixing, and configuring 10G Base -SR (SFP+) MM transceiver compliant with IEEE 802.3 standards erected in provided rack complete.	Rs.55,003.20	Rupees Fifty Five Thousand Three and Twenty Paise Only	Each	Rs.4,40,025.60
			Item no.	22			
10.00	8.00	18.00	Supplying and plugging 3 m fibre patch cord LC-LC MM (50) OM3 LSZH duplex complete compliant to IEC 60793/IEC 60794 standards as per specification no. WG-ELVC/FPC	Rs.4,097.80	Rupees Four Thousand Ninety Six and Eighty Paise Only	Each	Rs.73,742.40
			Item no.	23			
1.00	5.00	6.00	Supplying and fixing IP66 ABS enclosure for fibre splicing with raised hinged splice trays to house up to 48 fibers with multiple galnd entry points including heat shrink splice protectors complete.	Rs.11,623.20	Rupees Eleven Thousand Six Hundred Twenty Three and Twenty Paise Only	Each	Rs.69,739.20
			Item no.	24			

Contractor

No. of Corrections

SDE
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RID Kolad

Qty For Pick-up wear	Qty For Forbay Dam	Total Qty	Items	Rate	Rate in Words	Unit	Amount
0	330.00	330.00	Supplying and erecting 12 fibers LSZH armoured multimode optical fibre cable with , core dia 50/125 µm (OM3), suitable up to 10 GBPS, compliant to IEC 60793/IEC 60794 standards, on wall/ceiling or laid in provided pipe/trench as per specification no. WG-ELVC/OFC	Rs.362.40	Rupees Three Hundred Sixty Two and Forty Paise Only	Mtr	Rs.1,19,592.00
			Item no.	25			
0	2.00	2.00	Supplying, erecting & terminating 5 m HDMI cord low voltage grade minimum 4k compliant to be laid in provided conduits with male/female 19pin HDMI connectors complete.	Rs.2,879.80	Rupees Two Thousand Eight Hundred Seventy Eight and Eighty Paise Only	Each	Rs.5,757.60
			Item no.	26			
186.00	106.00	292.00	Supplying and erecting mains with 2x1.5 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	Rs.55.80	Rupees Fifty Five and Twenty Paise Only	Mtr	Rs.16,118.40
			Item no.	27			
122.00	227.00	349.00	Supplying and erecting HMS PVC conduit FRLS grade 25 mm dia. With PVC accessories on wall /ceiling as per specification No: WG-MA/CON.	Rs.115.20	Rupees One Hundred Fifteen and Twenty Paise Only	Mtr	Rs.40,204.80
			Item no.	28			

Contractor

No. of Corrections

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Qty For Pick-up wear	Qty For Forbay Dam	Total Qty	Items	Rate	Rate in Words	Unit	Amount
2.00	2.00	4.00	Providing, fixing & installation of high quality, latest & advance LED light system with Motion detection control & multicolour LED lighting (Optional) for the work of - Providing, fixing, installation, commissioning of latest advanced specialised Wi-Fi /Wired Transmission control based security monitoring & supervision system with smart intelligent interface connectivity along with all required software, hardware, electronics, electrical, civil works & alternative power backup etc.	Rs.13,500.00	Rupees Thirteen Thousand Five Hundred Only	Each	Rs.54,000.00
Sub Total							Rs.61,84,098.66
			Item no.	29			
1.00			Providing required programming (customized / developed as per site requirement / in-built / on line Software) & Onetime Commissioning, testing & training (immediately after commissioning, for any number of persons) with skilled manpower, professional charges etc. complete.	7.00%	Seven Percentage	Per System	Rs.4,32,886.91
			Item no.	30			
1.00	1.00	2.00	Service charges for providing & implementing services for any available network with low upload speed (Min. 5 to 10 MBPS variable or constant) within line of sight for visual monitoring of remote smart dam system security monitoring devices from anywhere for any one permanent location including all necessary hardware support & one-year on-site comprehensive warranty & service charges etc. complete.	Rs.15,000.00	Rupees Fifteen Thousand Only	Per SMD/ year	Rs.30,000.00
			Item no.	31			
1.00	1.00	2.00	Yearly subscription & licensee fees for Supply Installation testing and commissioning of Centralized	Rs.25,000.00	Rupees Twenty Five Thousand	Per SMD/	Rs.50,000.00

Contractor

No. of Corrections

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Qty For Pick-up wear	Qty For Forbay Dam	Total Qty	Items	Rate	Rate in Words	Unit	Amount
			Video monitoring Software with perpetual license for live monitoring and instant playback with one-year service plan & on-site comprehensive warranty & service charges etc. complete. (Centralized monitoring acts as a constant watch-dog, ensuring tighter security and preventing unexpected events), Live monitoring of events & to brings all locations closer, improving visibility, control, compliance and productivity, Well-planned and consistent security policy with centralized control through a single system, Single dashboard for consolidated live view of video from anywhere in the world, centrally defined, controlled and owned responsibility for video surveillance. The same shall be done without any additional cost with one-year on-site comprehensive warranty & service charges etc. complete.		Only	year	
			Item no.	32			

Contractor

No. of Corrections

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Qty For Pick-up wear	Qty For Forbay Dam	Total Qty	Items	Rate	Rate in Words	Unit	Amount
1.00	1.00	2.00	Supply Installation testing and commissioning of Video Management System (Perpetual License) including on-site warranty & service charges etc. complete. The Video Management System shall incorporate fully integrated matrix functionality for distributed viewing of any security monitoring device in the system from any smartphone or a tablet (a mobile device) with the client viewer. VMS shall provide the ability to save any event that was tagged as an alarm (video motion detection, video loss or input) received, to be saved. The VMS shall be capable of being deployed in a virtualized environment without loss of any functionality. VMS shall support video streams up to at least 60fps Monitoring module shall allow for continuous monitoring of the operational status and event-triggered alarms from, cameras and other devices. Viewing live video from security monitoring devices on the surveillance system with Playback recordings from cameras on the surveillance system, with a selection of advanced navigation tools, including an intuitive timeline browser. VMS shall support access and view of security monitoring device on a smartphone or a tablet (a mobile device) .The same shall be done without any additional cost with one-year on-site comprehensive warranty & service charges etc. complete.	Rs.12,300	Rupees Twelve Thousand Three Hundred Only	Per SMD/ year	Rs.24,600.00
Total							Rs.67,21,585.57
Say							Rs.67,21,586.00
Rs. Sixty-Seven Lakh Twenty-One Thousand Five Hundred Eighty-Six Only.							

Note: - All work shall be carried out as per specifications of the tender or as directed by engineer incharge.

Contractor

No. of Corrections

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SCHEDULE 'C'**Name of Work =**

Providing, fixing, installation, commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backup and smart intelligent interface connectivity etc. complete etc. complete at Bhira Pick up wear & Rawalje Dam.

Sr.No.	Description of Item	Specifications
1	Providing, Fixing, Installation, Commissioning, Testing, Training & Maintaining Latest advanced Digital Transmission Control Protocol based Infrared, stationary Security Monitoring & Supervision devices with Original Equipment Manufacturer's (OEM) of branded companies along with CE, BIS & FCC certification for monitoring & supervision of entrance & exit gates / roads & essential locations on dam site for security of different locations of dam site etc. complete.	High quality, latest & advance, Out door IP66 (Weatherproof), OnVIF BULLET CAMERA must be Original Equipment Manufacturer's (OEM) of specified branded makes along with CE, BIS & FCC certification & minimum specifications - 5.0 Megapixel, IR Bullet, IR Distance 30 to 50m, PoE, Onvif, 2.7~ 13.5 mm motorised Varifocal with P-Iris,1/2.8" SONY STARVIS Series CMOS Sensor with EXMOR Technology for Exceptional low light performance, True WDR with smart variation of exposure time & rectification of over-exposed & under-exposed areas, Latest H.265 compression technique which saves up to 50% on bandwidth & storage, Adaptive & smart Streaming which reduces frame rate during no activity period & divides a single bitrates based on its importance, Greater Coverage, Intelligent Video analytics - Motion & Intrusion detection, Real time notification.

Contractor

No. of Corrections

SDE
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RID Kolad

Sr.No.	Description of Item	Specifications
2	<p>Providing, Fixing, Installation of Latest advanced Digital Transmission Control Protocol based Remotely controllable high speed mini dome outdoor Pantiltzoom Security Monitoring & Supervision devices with Original Equipment Manufacturer's (OEM) of Specified branded companies along with CE, BIS & FCC certification along & Weatherproof & Vandal proof housing for monitoring & supervision of complete site for overall security of site etc. Complete.</p>	<p>High quality, latest & advance IP66 (Weatherproof), OnVIF Outdoor Pan Tilt Zoom (PTZ) cameras must be Original Equipment Manufacturer's (OEM) of specified branded makes along with CE, BIS & FCC certification & minimum specifications - 2.0 Megapixel, IR Distance up to 50 mtr, PoE, 22X digital zoom, Pan / Tilt Range Pan: 360° endless; Tilt: -15° ~ 90°(Auto Flip), True WDR with smart variation of exposure time & rectification of over-exposed & under-exposed areas, Latest H.265 compression technique which saves up to 50% on bandwidth & storage, Adaptive & smart Streaming which reduces frame rate during no activity period & divides a single bitrates based on its importance, Greater Coverage, Intelligent Video analytics - Motion & Intrusion detection with Real time notification.</p>
3	<p>Providing, Fixing, Installation of Latest advanced Digital Transmission Control Protocol based 8Ch Network Video Recorder with Original Equipment Manufacturer's (OEM) of Matrix/Uniview/Wbox branded companies along with CE, BIS & FCC certification etc. complete</p>	<p>High quality, latest & advance 8 Chanel Network Video Recorder (NVR) must be Original Equipment Manufacturer's (OEM) & must have Manufacturer's Authorisation Form (MAF) of makes Matrix/Uniview/Wbox along with CE, BIS & FCC certification with minimum Specifications - Latest H.265 compression technique which saves up to 50% on bandwidth & storage, VIDEO Input 8 IP Channels ,Output HDMI (2.0) – 1 Port, 4K Decoding Technique for high resolution images with greater details, 12MP Recording Capability, Adaptive Recording(Automatically Reduces the Number of Frames Captured Per Second Where There is No Motion, Thereby Saving Storage Space up to 60%), Camera-Wise Recording Retention which enables flexibility of recording retention days based on priority of camera, Saving 30% of storage space & High-Throughput for higher up-link & down-link speed ,up to 512 Mbps Throughput.</p>

Contractor

No. of Corrections

SDE
BHEP Rawalje

Executive Engineer
RID Kolad

Sr.No.	Description of Item	Specifications
4	Providing, Fixing, Installation, Commissioning, Testing, Training & Maintaining of high quality, latest & advance Recording & Storage Unit storage capacity of minimum 1 TB (Tetra Byte) etc. Complete.	Providing, Fixing, Installation, Commissioning, Testing, Training & Maintaining of high quality, latest & advance Recording & Storage Unit storage capacity of minimum 1 TB (Tetra Byte) - from factor 3.5 inch, support for advance format (AF) - Yes, Supporting recording technology - CMR, Cameras supported up to 64, drive bays supported - 8, interface transfer rate (Max) buffer to host - 6 GB/S, cache (MB) - 64, average power requirement 3 vatt read/write - 3.8, Idie 3.2, stand by & sleep -0.6
5	Providing, fixing & installation of high quality, latest & advance Video Secure Outdoor Weatherproof Heavy Duty Aluminium Housing Mount Enclosure along with brackets & clamps etc. Complete.	High quality, latest & advance, Industrial Grade, durable Video Secure Outdoor Weatherproof Heavy Duty Aluminium CCTV Security Surveillance Camera Housing Mount Enclosure along with brackets, clamps & other required hardware etc. complete for Providing, fixing, installation, commissioning, testing, maintaining & training of Latest, Advance, Digital, Transmission Control Protocol based Security monitoring & supervision System. The OUTDOOR CAMERA HOUSING WITH BACK OPENING is strong, durable & easily accessible to the camera via the front hinged cover and back which prevents unauthorized access. Adjustable camera tray and top swings open make for easy installation and service. CCTV Camera Stand will hold a camera up to 25 kg without introducing unwanted resonance to its Video. suitable for Providing, fixing, installation, commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backup and smart intelligent interface connectivity etc. complete

Contractor

No. of Corrections

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Sr.No.	Description of Item	Specifications
6	Providing, fixing & installation of high quality, latest & advance Industrial Grade, durable 5 V , 12 V , 24 V Dc to Buck & Boost Regulated Voltage Power Supply etc. Complete.	Providing, fixing & installation of high quality, latest & advance DC to DC 120 Watt input 10 to 50 Volt to output 12 to 70 Volt for required output of 5 V, 12 V , 24 V DC Buck & Boost conversion for the work of Providing, fixing, installation, commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backup and smart intelligent interface connectivity etc. complete
7	Splicing (making joints of optical fibre cable) of FR grade pvc armoured multimode armoured multimode optical fibre cable with the help Splicing machine etc. Complete.	Splicing (making joints of optical fibre cable) of FR grade pvc armoured multimode armoured multimode optical fibre cable with the help of High quality, latest & advance, Industrial Grade Splicing machine for the work of - Providing, fixing, installation, commissioning of latest advanced specialised Wi-Fi /Wired Transmission control based security monitoring & supervision system with smart intelligent interface connectivity along with all required software, hardware, electronics, electrical, civil works & alternative power backup etc.
8	Supplying and erecting 30Ah Lifepo4 (Lithium Ion) battery etc. Complete.	Supplying and erecting 30Ah Lifepo4 (Lithium Ion) battery with capacity of individual cell 3.2 V - 30 AH, cell type prismatic, total energy of battery 384 WAH recommended charging current 10 AMP, recommended discharging current 10 AMP, short circuit protection - yes, 400+/- 100 micro second etc. complete for the work of - Providing, fixing, installation, commissioning of latest advanced specialised Wi-Fi /Wired Transmission control based security monitoring & supervision system with smart intelligent interface connectivity along with all required software, hardware, electronics, electrical, civil works & alternative power backup etc.

Contractor

No. of Corrections

SDE
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Sr.No.	Description of Item	Specifications
9	Supplying and erecting 80Ah Lifepo4 (Lithium Ion) battery etc. Complete.	Supplying and erecting 80Ah Lifepo4 (Lithium Ion) battery with capacity of individual cell 3.2 V -80 AH, cell type prismatic, total energy of battery 1024 WAh recommended charging current 20 AMP, recommended discharging current 20 AMP, short circuit protection - yes, 400+ or - 100 micro second etc. complete for the work of - Providing, fixing, installation, commissioning of latest advanced specialised Wi-Fi /Wired Transmission control based security monitoring & supervision system with smart intelligent interface connectivity along with all required software, hardware, electronics, electrical, civil works & alternative power backup etc.
10	Providing, fixing & installation of high quality, latest & advance MPPT Solar Charge Controller etc. Complete	Providing, fixing & installation of high quality, latest & advance MPPT Solar Charge Controller - Solar input Voltage 12 V / 24 V auto, input current 10 to 30 A, low voltage protection for lithium battery 9.9 V, low voltage recovery for lithium battery 11.1 V, over voltage protection for lithium battery 18.5 V, over voltage recovery for lithium battery 18.0 V, supporting 3 charging mode (Bulk charge, Absorption, float charge), charge controller support for lead acid/lithium batteries/gel batteries for the work of - Providing, fixing, installation, commissioning of latest advanced specialised Wi-Fi /Wired Transmission control based security monitoring & supervision system with smart intelligent interface connectivity along with all required software, hardware, electronics, electrical, civil works & alternative power backup etc.

Contractor

No. of Corrections

SDE
BHEP RawaljeExecutive Engineer
RID Kolad

Sr.No.	Description of Item	Specifications
11	Providing, fixing & installation of class A, water resistant & durable, Ingress Protection 67, BIS compliant Solar panel etc. Complete	Providing, fixing & installation of class A, water resistant & durable, Ingress Protection 67, BIS compliant Solar panel etc. Complete. Poly crystalline Cells type Panel, Voltage: Voltage at Max Power (Vmax) - 18.05V, Open Circuit Voltage (Voc) - 2, Compliance to IEC standards, Best in Class conversion efficiency, Anti-reflective coating and back surface (BSF) for more light absorption, Advanced EVA (ethyl vinyl acetate) encapsulation to give better protection to modules, High strength light-weight aluminium frame design for high torsion resistance against winds and snow loads, PID resistance Technology (Potential- Induced Degradation) for safety against substantial power loss due to stray currents triggered by certain climate conditions, Excellent Low light performance in low visibility in clouds, evening, and morning.
12	Providing, fixing & installation of water resistant, durable & weatherproof Solar stand etc. Complete.	Providing, fixing & installation of water resistant, durable & weatherproof Solar stand etc. Complete. Rectangular Metal frame, water resistant paint coats. Metallic beams. can be mount on ground or pillar.
13	Supply, Installation, Testing, Integration & Commissioning of 49" LCD monitor at Conf. Room for display of total water system (Online)	Supply, Installation, Testing, Integration & Commissioning of 49" LCD monitor at Conf. Room for display of total water system (Online)
14	Supplying and fixing 9U Hybrid IP66 outdoor mount server rack with pole mount bracket (Dimension- DxWxH - 500x550x450 mm) as per specification no. WG-NAS/RAK	Supplying and fixing 9U Hybrid IP66 outdoor mount server rack with pole mount bracket (Dimension- DxWxH - 500x550x450 mm) as per specification no. WG-NAS/RAK
15	Supplying and fixing 24 U floor mount rack (Dimension- DxWxH – 800x600x1265 mm) as per specification No. WG-NAS/RAK	Supplying and fixing 24 U floor mount rack (Dimension- DxWxH – 800x600x1265 mm) as per specification No. WG-NAS/RAK
16	Providing, Fixing, Installation of high quality, latest & advance lan to media convertor Connection device with metal cover etc. Complete.	Providing, Fixing, Installation of high quality, latest & advance lan to media convertor Connection device with metal cover etc. Complete.

Contractor

No. of Corrections

SDE
BHEP RawaljeExecutive Engineer
RID Kolad

Sr.No.	Description of Item	Specifications
17	Supplying, fixing, and configuring modularised multi-service router 802.11/a/n/ac unified Wave 2.5 GHz, with RJ-45 port, supporting 1 to 13 channels for 2.4 GHz, with unified wireless access point complete	Supplying, fixing, and configuring modularized multi-service router must be Original Equipment Manufacturer's (OEM) & must have Manufacturer's Authorization Form (MAF) of Airspan Networks/Ruijie Networks co. along with FCC certification 802.11/a/n/ac unified Wave 2.5 GHz, with RJ-45 port, supporting 1 to 13 channels for 2.4 GHz, with unified wireless access point complete
18	Supplying and installing LSZH sheathed HDPE insulated copper cat-6A cable suitable for networking compliant with ANSI/TIA-568.2-D standards in provided conduit/casing-n-capping as per specification no. WG-ELVC/NC	Supplying and installing LSZH sheathed HDPE insulated copper cat-6A cable suitable for networking compliant with ANSI/TIA-568.2-D standards in provided conduit/casing-n-capping as per specification no. WG-ELVC/NC
19	Supplying and fixing 2 m 24 AWG multi stranded UTP patch cord with RJ-45 factory crimped connector of cat 6A type compliant ANSI/TIA-568.2-D standards in position as per specification no. WG-ELVC/PC	Supplying and fixing 2 m 24 AWG multi stranded UTP patch cord with RJ-45 factory crimped connector of cat 6A type compliant ANSI/TIA-568.2-D standards in position as per specification no. WG-ELVC/PC
20	Supplying, fixing, and configuring 8-ports managed gigabit, layer-2 switch, 10/100/1000 base-T, PoE smart switch plus 2 SFP erected in provided rack compliant with IEEE 802.3 standards complete.	Supplying, fixing, and configuring 8-ports managed gigabit, layer-2 switch, 10/100/1000 base-T, PoE smart switch plus 2 SFP erected in provided rack compliant with IEEE 802.3 standards complete.
21	Supplying, fixing, and configuring 10G Base -SR (SFP+) MM transceiver compliant with IEEE 802.3 standards erected in provided rack complete.	Supplying, fixing, and configuring 10G Base -SR (SFP+) MM transceiver compliant with IEEE 802.3 standards erected in provided rack complete.
22	Supplying and plugging 3 m fibre patch cord LC-LC MM (50) OM3 LSZH duplex complete compliant to IEC 60793/IEC 60794 standards as per specification no. WG-ELVC/FPC	Supplying and plugging 3 m fibre patch cord LC-LC MM (50) OM3 LSZH duplex complete compliant to IEC 60793/IEC 60794 standards as per specification no. WG-ELVC/FPC
23	Supplying and fixing IP66 ABS enclosure for fibre splicing with raised hinged splice trays to house up to 48 fibers with multiple galnd entry points including heat shrink splice protectors complete.	Supplying and fixing IP66 ABS enclosure for fibre splicing with raised hinged splice trays to house up to 48 fibers with multiple galnd entry points including heat shrink splice protectors complete.

Contractor

No. of Corrections

SDE
BHEP RawaljeExecutive Engineer
RID Kolad

Sr.No.	Description of Item	Specifications
24	Supplying and erecting 12 fibers LSZH armoured multimode optical fibre cable with , core dia 50/125 µm (OM3), suitable up to 10 GBPS, compliant to IEC 60793/IEC 60794 standards, on wall/ceiling or laid in provided pipe/trench as per specification no. WG-ELVC/OFC	Supplying and erecting 12 fibers LSZH armoured multimode optical fibre cable with , core dia 50/125 µm (OM3), suitable up to 10 GBPS, compliant to IEC 60793/IEC 60794 standards, on wall/ceiling or laid in provided pipe/trench as per specification no. WG-ELVC/OFC
25	Supplying, erecting & terminating 5 m HDMI cord low voltage grade minimum 4k compliant to be laid in provided conduits with male/female 19pin HDMI connectors complete.	Supplying, erecting & terminating 5 m HDMI cord low voltage grade minimum 4k compliant to be laid in provided conduits with male/female 19pin HDMI connectors complete.
26	Supplying and erecting mains with 2x1.5 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	Supplying and erecting mains with 2x1.5 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW
27	Supplying and erecting HMS PVC conduit FRLS grade 25 mm dia. With PVC accessories on wall /ceiling as per specification No: WG-MA/CON.	Supplying and erecting HMS PVC conduit FRLS grade 25 mm dia. With PVC accessories on wall /ceiling as per specification No: WG-MA/CON.
28	Providing, fixing & installation of high quality, latest & advance LED light system with Motion detection control & multicolour LED lighting (Optional) for the work of - Providing, fixing, installation, commissioning of latest advanced specialised Wi-Fi /Wired Transmission control based security monitoring & supervision system with smart intelligent interface connectivity along with all required software, hardware, electronics, electrical, civil works & alternative power backup etc.	Providing, fixing & installation of high quality, latest & advance LED light system with Motion detection control & multicolour LED lighting (Optional) for the work of - Providing, fixing, installation, commissioning of latest advanced specialised Wi-Fi /Wired Transmission control based security monitoring & supervision system with smart intelligent interface connectivity along with all required software, hardware, electronics, electrical, civil works & alternative power backup etc.

Contractor

No. of Corrections

SDE
BHEP RawaljeExecutive Engineer
RID Kolad

Sr.No.	Description of Item	Specifications
29	Providing required programming (customized / developed as per site requirement / in-built / on line Software) & Onetime Commissioning, testing & training (immediately after commissioning, for any number of persons) with skilled manpower, professional charges etc. complete.	Providing on-site maintenance & services in defect liability period of one year etc. complete for the satisfactory working of Latest, Advance, Digital, Transmission Control Protocol based Security monitoring & supervision System etc. Complete for the work of - Providing, fixing, installation, commissioning of latest advanced specialised Wi-Fi /Wired Transmission control based security monitoring & supervision system with smart intelligent interface connectivity along with all required software, hardware, electronics, electrical, civil works & alternative power backup etc.
30	Service charges for providing & implementing services for any available network with low upload speed (Min. 5 to 10 MBPS variable or constant) within line of sight for visual monitoring of remote smart dam system security monitoring devices from anywhere for any one permanent location including all necessary hardware support & one-year on-site comprehensive warranty & service charges etc. complete.	Service charges for providing & implementing services for any available network with low upload speed (Min. 5 to 10 MBPS variable or constant) within line of sight for visual monitoring of remote smart dam system security monitoring devices from anywhere for any one permanent location including all necessary hardware support & one-year on-site comprehensive warranty & service charges etc. complete.

Contractor

No. of Corrections

SDE
BHEP Rawalje

Executive Engineer
RID Kolad

Sr.No.	Description of Item	Specifications
31	Yearly subscription & licensee fees for Supply Installation testing and commissioning of Centralized Video monitoring Software with perpetual license for live monitoring and instant playback with one-year service plan & on-site comprehensive warranty & service charges etc. complete. (Centralized monitoring acts as a constant watch-dog, ensuring tighter security and preventing unexpected events), Live monitoring of events & to brings all locations closer, improving visibility, control, compliance and productivity, Well-planned and consistent security policy with centralized control through a single system, Single dashboard for consolidated live view of video from anywhere in the world, centrally defined, controlled and owned responsibility for video surveillance. The same shall be done without any additional cost with one-year on-site comprehensive warranty & service charges etc. complete.	Yearly subscription & licensee fees for Supply Installation testing and commissioning of Centralized Video monitoring Software with perpetual license for live monitoring and instant playback with one-year service plan & on-site comprehensive warranty & service charges etc. complete. (Centralized monitoring acts as a constant watch-dog, ensuring tighter security and preventing unexpected events), Live monitoring of events & to brings all locations closer, improving visibility, control, compliance and productivity, Well-planned and consistent security policy with centralized control through a single system, Single dashboard for consolidated live view of video from anywhere in the world, centrally defined, controlled and owned responsibility for video surveillance. The same shall be done without any additional cost with one-year on-site comprehensive warranty & service charges etc. complete.

Contractor

No. of Corrections

SDE
BHEP Rawalje

Executive Engineer
RID Kolad

Sr.No.	Description of Item	Specifications
32	<p>Supply Installation testing and commissioning of Video Management System (Perpetual License) including on-site warranty & service charges etc. complete. The Video Management System shall incorporate fully integrated matrix functionality for distributed viewing of any security monitoring device in the system from any smartphone or a tablet (a mobile device) with the client viewer. VMS shall provide the ability to save any event that was tagged as an alarm (video motion detection, video loss or input) received, to be saved. The VMS shall be capable of being deployed in a virtualized environment without loss of any functionality. VMS shall support video streams up to at least 60fps Monitoring module shall allow for continuous monitoring of the operational status and event-triggered alarms from, cameras and other devices. Viewing live video from security monitoring devices on the surveillance system with Playback recordings from cameras on the surveillance system, with a selection of advanced navigation tools, including an intuitive timeline browser. VMS shall support access and view of security monitoring device on a smartphone or a tablet (a mobile device) .The same shall be done without any additional cost with one-year on-site comprehensive warranty & service charges etc. complete.</p>	<p>Supply Installation testing and commissioning of Video Management System (Perpetual License) including on-site warranty & service charges etc. complete. The Video Management System shall incorporate fully integrated matrix functionality for distributed viewing of any security monitoring device in the system from any smartphone or a tablet (a mobile device) with the client viewer. VMS shall provide the ability to save any event that was tagged as an alarm (video motion detection, video loss or input) received, to be saved. The VMS shall be capable of being deployed in a virtualized environment without loss of any functionality. VMS shall support video streams up to at least 60fps Monitoring module shall allow for continuous monitoring of the operational status and event-triggered alarms from, cameras and other devices. Viewing live video from security monitoring devices on the surveillance system with Playback recordings from cameras on the surveillance system, with a selection of advanced navigation tools, including an intuitive timeline browser. VMS shall support access and view of security monitoring device on a smartphone or a tablet (a mobile device) .The same shall be done without any additional cost with one-year on-site comprehensive warranty & service charges etc. complete.</p>

Contractor

No. of Corrections

SDE
BHEP Rawalje

Executive Engineer
RID Kolad

DRAWINGS

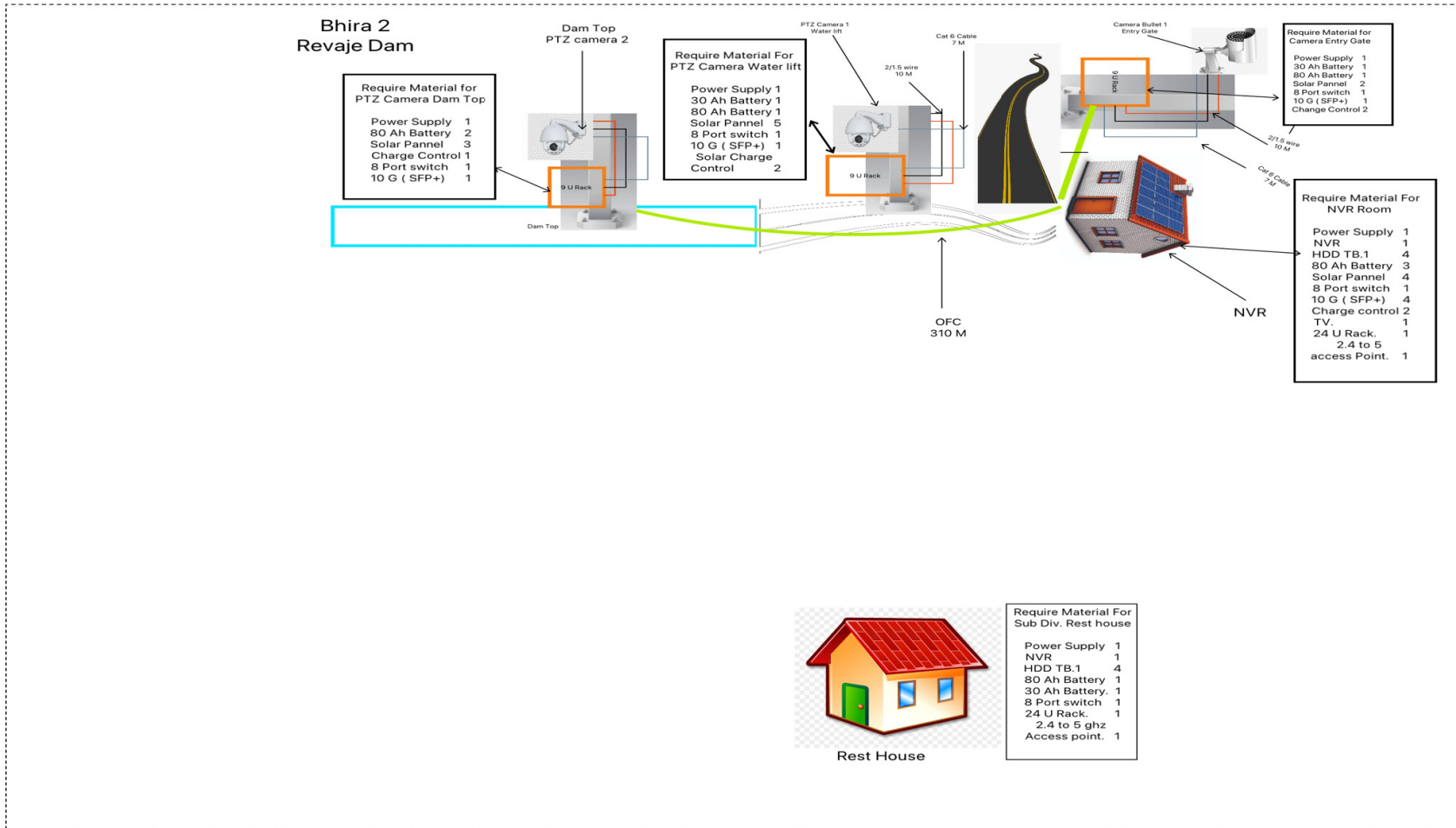
Contractor

No. of Corrections

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RID Kolad**

Rawalaje Dam Drawing



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Rawalaje Dam Google MAP



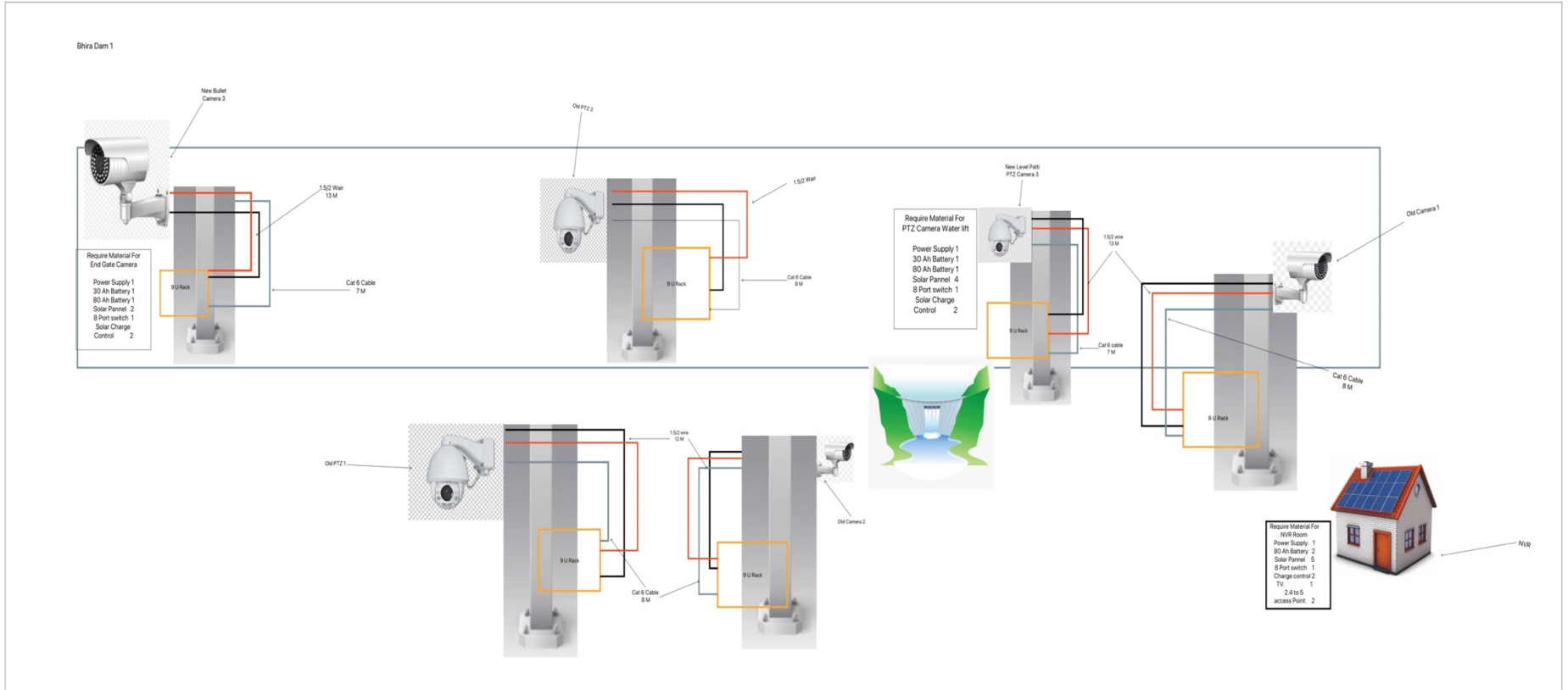
Contractor

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RID Kolad**

Bhira Dam Draing



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**Executive Engineer
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Bhira Dam MAP



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MonthWise Work Program

Name of work Providing, fixing, installation, commissioning of IoT based data transmission system along with customized solutions & smart intelligent reconnaissance system with alternative power backup and smart intelligent interface connectivity etc. complete at Bhira Pick up wear & Rawalje Dam. Dam. etc. complete at Bhira Pick up wear & Rawalje Dam.

Item	Unit	Total Qty	1 st & 2 nd Month	3 rd & 4 th Month	5 th & 6 th Month	7 th & 8 th Month	9 th & 10 th Month	11 th & 12 th Month	Remarks
Providing, Fixing, Installation, Commissioning, Testing, Training & Maintaining Latest advanced Digital Transmission Control Protocol based Infrared, stationary Security Monitoring & Supervision devices with Original Equipment Manufacturer's (OEM) of branded companies along with CE, BIS & FCC certification for monitoring & supervision of entrance & exit gates / roads & essential locations on dam site for security of different locations of dam site etc. complete.	No's	2.00		2.00					
Providing, Fixing, Installation of Latest advanced Digital Transmission Control Protocol based Remotely controllable highspeed mini dome outdoor Pantiltzoom Security Monitoring & Supervision devices with Original Equipment Manufacturer's (OEM) of Specified branded companies along with CE, BIS & FCC certification along & Weatherproof & Vandal proof housing for monitoring & supervision of complete site for	No's	3.00		3.00					8.00

Contractor

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Item	Unit	Total Qty	1 st & 2 nd Month	3 rd & 4 th Month	5 th & 6 th Month	7 th & 8 th Month	9 th & 10 th Month	11 th & 12 th Month	Remarks
overall security of site etc. Complete.									
Providing, Fixing, Installation of Latest advanced Digital Transmission Control Protocol based 8Ch Network Video Recorder with Original Equipment Manufacturer's (OEM) of Matrix/Uniview/Wbox branded companies along with CE, BIS & FCC certification etc. complete.	No's	2.00		2.00				34.00	
Providing, Fixing, Installation, Commissioning, Testing, Training & Maintaining of high quality, latest & advance Recording & Storage Unit storage capacity of minimum 1 TB (Tetra Byte) etc. Complete.	TB	8.00		8.00					
Providing, fixing & installation of high quality, latest & advance Video Secure Outdoor Weatherproof Heavy Duty Aluminium Housing Mount Enclosure along with brackets & clamps etc. Complete.	No's	2.00		2.00					
Providing, fixing & installation of high quality, latest & advance Industrial Grade, durable 5 V, 12 V, 24 V Dc to Buck & Boost Regulated Voltage Power Supply etc. Complete.	No's	14.00	14.00						
Splicing (making joints of optical fibre cable) of FR grade pvc armoured multimode armoured multimode optical fibre cable with the help	No's.	27.00	27.00						

Contractor

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Item	Unit	Total Qty	1 st & 2 nd Month	3 rd & 4 th Month	5 th & 6 th Month	7 th & 8 th Month	9 th & 10 th Month	11 th & 12 th Month	Remarks
Splicing machine etc. Complete.									
Supplying and erecting 30Ah Lifepo4 (Lithium Ion) battery etc. Complete.	No's	5.00	5.00						
Supplying and erecting 80Ah Lifepo4 (Lithium Ion) battery etc. Complete.	No's	16.00	16.00						
Providing, fixing & installation of high quality, latest & advance MPPT Solar Charge Controller etc. Complete	No's	19.00	19.00						
Providing, fixing & installation of class A, water resistant & durable, Ingress Protection 67, BIS compliant Solar panel etc. Complete	No's	35.00		35.00					
Providing, fixing & installation of water resistant, durable & weatherproof Solar stand etc. Complete.	No's	35.00	35.00						
Supply, Installation, Testing, Integration & Commissioning of 49" LCD monitor at Conf. Room for display of total water system (Online)	No's	1.00		1.00					
Supplying and fixing 9U Hybrid IP66 outdoor mount server rack with pole mount bracket (Dimension- DxWxH - 500x550x450 mm) as per specification no. WG-NAS/RAK	No's	6.00	6.00						
Supplying and fixing 24 U floor mount rack (Dimension-DxWxH – 800x600x1265 mm) as per specification No. WG-NAS/RAK	No's	2.00	2.00						

Contractor

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Item	Unit	Total Qty	1 st & 2 nd Month	3 rd & 4 th Month	5 th & 6 th Month	7 th & 8 th Month	9 th & 10 th Month	11 th & 12 th Month	Remarks
Providing, Fixing, Installation of high quality, latest & advance lan to media convertor Connection device with metal cover etc. Complete.	No's	26.00	26.00						
Supplying, fixing, and configuring modularised multi-service router 802.11/a/n/ac unified Wave 2.5 GHz, with RJ-45 port, supporting 1 to 13 channels for 2.4 GHz, with unified wireless access point complete	No's	4.00		4.00					
Supplying and installing LSZH sheathed HDPE insulated copper cat-6A cable suitable for networking compliant with ANSI/TIA-568.2-D standards in provided conduit/casing-n-capping as per specification no. WG-ELVC/NC	Mtr	214.00	214.00						
Supplying and fixing 2 m 24 AWG multi stranded UTP patch cord with RJ-45 factory crimped connector of cat 6A type compliant ANSI/TIA-568.2-D standards in position as per specification no. WG-ELVC/PC	No's	28.00	28.00						
Supplying, fixing, and configuring 8-ports managed gigabit, layer-2 switch, 10/100/1000 base-T, PoE smart switch plus 2 SFP erected in provided rack compliant with IEEE 802.3 standards complete.	No's	9.00	9.00						
Supplying, fixing, and configuring 10G Base -SR (SFP+) MM transceiver compliant with IEEE 802.3 standards erected in provided rack complete.	No's	8.00	8.00						

Contractor

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Item	Unit	Total Qty	1 st & 2 nd Month	3 rd & 4 th Month	5 th & 6 th Month	7 th & 8 th Month	9 th & 10 th Month	11 th & 12 th Month	Remarks
Supplying and plugging 3 m fibre patch cord LC-LC MM (50) OM3 LSZH duplex complete compliant to IEC 60793/IEC 60794 standards as per specification no. WG-ELVC/FPC	No's	18.00	18.00						
Supplying and fixing IP66 ABS enclosure for fibre splicing with raised hinged splice trays to house up to 48 fibers with multiple galnd entry points including heat shrink splice protectors complete.	No's	6.00	6.00						
Supplying and erecting 12 fibers LSZH armoured multimode optical fibre cable with, core dia 50/125 µm (OM3), suitable up to 10 GBPS, compliant to IEC 60793/IEC 60794 standards, on wall/ceiling or laid in provided pipe/trench as per specification no. WG-ELVC/OFC	Mtr.	330.00	330.00						
Supplying, erecting & terminating 5 m HDMI cord low voltage grade minimum 4k compliant to be laid in provided conduits with male/female 19pin HDMI connectors complete.	No's	2.00		2.00					
Supplying and erecting mains with 2x1.5 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	Mtr.	292.00	292.00						
Supplying and erecting HMS PVC conduit FRLS grade 25 mm dia. With PVC accessories on wall /ceiling as per specification No: WG-MA/CON.	Mtr.	349.00	349.00						

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Providing, fixing & installation of high quality, latest & advance LED light system with Motion detection control & multicolour LED lighting (Optional) for the work of - Providing, fixing, installation, commissioning of latest advanced specialised Wi-Fi /Wired Trans-mission control-based security monitoring & supervision system with smart intelligent interface connectivity along with all required software, hardware, electronics, electrical, civil works & alternative power backup etc.	No's	4.00	4.00							
Providing required programming (customized / developed as per site requirement / in-built / on line Software) & Onetime Commissioning, testing & training (immediately after commissioning, for any number of persons) with skilled manpower, professional charges etc. complete.	Per System	1.00			1.00					
Service charges for providing & implementing services for any available network with low upload speed (Min. 5 to 10 MBPS variable or constant) within line of sight for visual monitoring of remote smart dam system security monitoring devices from anywhere for any one permanent location including all necessary hardware support & one-year on-site comprehensive warranty & service charges etc. complete.	Per SMD/Year	2.00	2.00							

Contractor

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Item	Unit	Total Qty	1 st & 2 nd Month	3 rd & 4 th Month	5 th & 6 th Month	7 th & 8 th Month	9 th & 10 th Month	11 th & 12 th Month	Remarks
<p>Yearly subscription & licensee fees for Supply Installation testing and commissioning of Centralized Video monitoring Software with perpetual license for live monitoring and instant playback with one-year service plan & on-site comprehensive warranty & service charges etc. complete. (Centralized monitoring acts as a constant watch-dog, ensuring tighter security and preventing unexpected events), Live monitoring of events & to brings all locations closer, improving visibility, control, compliance and productivity, Well-planned and consistent security policy with centralized control through a single system, Single dashboard for consolidated live view of video from anywhere in the world, centrally defined, controlled and owned responsibility for video surveillance. The same shall be done without any additional cost with one-year on-site comprehensive warranty & service charges etc. complete.</p>	Per SMD/Year	2.00	2.00						

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Item	Unit	Total Qty	1 st & 2 nd Month	3 rd & 4 th Month	5 th & 6 th Month	7 th & 8 th Month	9 th & 10 th Month	11 th & 12 th Month	Remarks
<p>Supply Installation testing and commissioning of Video Management System (Perpetual License) including on-site warranty & service charges etc. complete. The Video Management System shall incorporate fully integrated matrix functionality for distributed viewing of any security monitoring device in the system from any smartphone or a tablet (a mobile device) with the client viewer. VMS shall provide the ability to save any event that was tagged as an alarm (video motion detection, video loss or input) received, to be saved. The VMS shall be capable of being deployed in a virtualized environment without loss of any functionality. VMS shall support video stream up to at least 60fps Monitoring module shall allow for continuous monitoring of the operational status and event-triggered alarms from, cameras and other devices. Viewing live video from security monitoring devices on the surveillance system with Playback recordings from cameras on the surveillance system, with a selection of advanced navigation tools, including an intuitive timeline browser. VMS shall support access and view of security monitoring device on a smartphone or a tablet (a mobile device) The same shall be done without any additional cost with one year on-site comprehensive warranty & service charges etc. complete.</p>	Per SMD/Year	2.00	2.00						

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