

BID IDENTIFICATION NO: **CE-Bldg-I-02/2026-27**



GOVERNMENT OF ODISHA
WORKS DEPARTMENT

COVER – I

TECHNICAL BID DOCUMENTS / DETAILED TENDER CALL NOTICE FOR THE WORK

“Construction of Additional Classroom and Auditorium Hall at J. N. College, Mahanga in the district of Cuttack”.

(Composite Tender)

Estimated Cost Put to Tender: ₹. **11,32,73,791/- (Excluding GST)**

**CHIEF ENGINEER, BUILDINGS-I, ODISHA,
BHUBANESWAR**

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**OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ODISHA
NIRMAN SOUDHA, UNIT-V, BHUBANESWAR
INVITATIONS FOR BIDS (IFB)**

File No.- B-II-(OLL&C)-19/2026

15389

/ Bhubaneswar, the

4th May, 2026

Invitation for Bids
2nd Corrigendum

Tender Reference No. CE-Bldg-I-02/2026-27

- Name of the Works :
- (1) "Planning, Design, Construction, Restoration and external development of Biplabi Dharanidhara Sangrahalaya at Kusumita Village in Keonjhar District",
 - (2) "Construction of (S+7) Storied Building near MHI for Infrastructure of Centre of Competence, SCB Medical College and Hospital, Cuttack",
 - (3) "Construction of Community Health Centre at Barkote in the district of Deogarh"
 - (4) "Construction of Additional Classroom and Auditorium Hall at J. N. College, Mahanga in the district of Cuttack"

The following changes have been made in Bid Identification No. CE-Bldg-I-02/2026-27

1. Bid documents such as DTCN / BOQ etc. can be seen / downloaded from the Govt. Website i.e. www.tendersorissa.gov.in, during the period from **dt.12.05.2026 to 17.00 hours of dt.28.05.2026** instead of dt.04.05.2026 to dt.19.05.2026 for ONLINE BIDDING respectively.
 2. **Online** bids shall be received till **17.00 Hours of dt.28.05.2026** instead of dt.19.05.2026.
 3. The technical bids will be opened at **11.30 A.M. of dt.29.05.2026** instead of dt.20.05.2026.
- All other terms and conditions remain unchanged.

Sd/-
Chief Engineer, Buildings-I, Odisha,
Bhubaneswar

Memo No. 15390

Dt. 04-05-2026

Copy forwarded to the Deputy Director (Advertisement) & Deputy Secretary to Govt., I. & P.R. Dept., Odisha, Bhubaneswar, with a request to get the 2nd Corrigendum to the Invitation For Bids (IFB) published in one no of leading Odia Daily and one no of National English Daily Newspapers at an early date for wide circulation.

Since, the date of receipt of bids starts from Dt.12.05.2026, it is requested that the 2nd corrigendum to "Invitation For Bids" may be published on or before dt.08.05.2026.

Complimentary copies of the Newspapers containing 2nd corrigendum of Invitation For Bids (IFB) may please be sent to this office for reference and record.

Encl : C.D. containing 2nd Corrigendum : 1 no

Sd/-
Chief Engineer, Buildings-I, Odisha,
Bhubaneswar



**OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ODISHA
NIRMAN SOUDHA, UNIT-V, BHUBANESWAR
INVITATIONS FOR BIDS (IFB)**

File No.- B-II-(OLL&C)-19/2026

14526

/ Bhubaneswar, the

27th April, 2026

**Invitation for Bids
1st Corrigendum**

Tender Reference No. CE-Bldg-I-02/2026-27

- Name of the Works :
- (1) "Planning, Design, Construction, Restoration and external development of Biplabi Dharanidhara Sangrahalaya at Kusumita Village in Keonjhar District",
 - (2) "Construction of (S+7) Storied Building near MHI for Infrastructure of Centre of Competence, SCB Medical College and Hospital, Cuttack",
 - (3) "Construction of Community Health Centre at Barkote in the district of Deogarh"
 - (4) "Construction of Additional Classroom and Auditorium Hall at J. N. College, Mahanga in the district of Cuttack"

The following changes have been made in Bid Identification No. CE-Bldg-I-02/2026-27

4. Bid documents such as DTCN / BOQ etc. can be seen / downloaded from the Govt. Website i.e. www.tendersorissa.gov.in, during the period from **dt.04.05.2026 to 17.00 hours of dt.19.05.2026** instead of dt.27.04.2026 to dt.12.05.2026 for ONLINE BIDDING respectively.
5. **Online** bids shall be received till **17.00 Hours of dt.19.05.2026** instead of dt.12.05.2026.
6. The technical bids will be opened at **11.30 A.M. of dt.20.05.2026** instead of dt.13.05.2026.
All other terms and conditions remain unchanged.

Sd/-
Chief Engineer, Buildings-I, Odisha,
Bhubaneswar

Memo No. 14527

Dt. 27-04-2026

Copy forwarded to the Deputy Director (Advertisement) & Deputy Secretary to Govt., I. & P.R. Dept., Odisha, Bhubaneswar, with a request to get the 1st Corrigendum to the Invitation For Bids (IFB) published in one no of leading Odia Daily and one no of National English Daily Newspapers at an early date for wide circulation.

Since, the date of receipt of bids starts from Dt.04.05.2026, it is requested that the 1st corrigendum to "Invitation For Bids" may be published on or before dt.30.04.2026.

Complimentary copies of the Newspapers containing 1st corrigendum of Invitation For Bids (IFB) may please be sent to this office for reference and record.

Encl : C.D. containing 1st Corrigendum : 1 no

Sd/-
Chief Engineer, Buildings-I, Odisha,
Bhubaneswar



**OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ODISHA
NIRMAN SOUDHA, UNIT-V, BHUBANESWAR
INVITATIONS FOR BIDS (IFB)**

File No-B-II-(OLL&C)-19/2026

Lr. No.- 12993

Bhubaneswar, the

15th April, 2026

Invitation for Bids

Bid Identification No. CE-Bldg-I-02/2026-27

1.	The Chief Engineer, Buildings-I, Odisha, Bhubaneswar, on behalf of Governor of Odisha, invites percentage rate bids in double cover system in ONLINE MODE only, for the works, (1) "Planning, Design, Construction, Restoration and external development of Biplabi Dharanidhara Sangrahalaya at Kusumita Village in Keonjhar District", (2) "Construction of (S+7) Storied Building near MHI for Infrastructure of Centre of Competence, SCB Medical College and Hospital, Cuttack", (3) "Construction of Community Health Centre at Barkote in the district of Deogarh" & (4) "Construction of Additional Classroom and Auditorium Hall at J. N. College, Mahanga in the district of Cuttack" as detailed below.		
2.	Nature of work	:	Building Works
3.	No. of work	:	04 Nos.
4.	Bid Cost.	:	₹10,000/-
5.	Class of Contractor	:	'A' / Special / Super
6.	Availability of Bid Documents in the website	:	From dt.27.04.2026 to 17.00 Hours of dt.12.05.2026.
7.	Date of Opening of Bid	:	Dt.13.05.2026 at 11:30 AM.
8.	The Bidders have to participate in ONLINE bidding only. Further details can be seen from the website: https://tendersodisha.gov.in . Any addendum / corrigendum / cancellation of tender can also be seen in the said website only.		

Sd/-

Chief Engineer, Buildings-I, Odisha

Memo No. 12994

Dt. 15-04-2026

Copy forwarded to the Deputy Director (Advertisement) & Deputy Secretary to Govt., I. & P.R. Dept., Odisha, Bhubaneswar, with a request to get the Invitation For Bids (IFB) published in one no of leading Odia Daily and one no of National English Daily Newspapers (All edition) at an early date for wide circulation.

Since, the date of receipt of bids starts from dt.27.04.2026, it is requested that the "Invitation For Bids" may be published on or before dt.22.04.2026.

Complimentary copies of the Newspapers containing Invitation For Bids (IFB) may please be sent to this office for reference and record.

Sd/-

Chief Engineer, Buildings-I, Odisha



**OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ODISHA
NIRMAN SOUDHA, UNIT-V, BHUBANESWAR**

Invitation for Bids

Bid Identification No. CE-Bldg-I-02/2026-27

File No.-B-II-(OLL&C)-19/2026

Lr. No.- 12995

/ Bhubaneswar, the

15th April, 2026

The Chief Engineer, Buildings-I, Odisha, Bhubaneswar, on behalf of Governor of Odisha, invites **percentage rate** bids in **double cover** system in **ONLINE MODE** only, for the following works.

Sl. No.	Name of Work	Value of work (Excluding GST)	Concerned S.E with Headquarters	Bid Security (In ₹.)	Cost of document	Period of completion	Class of Bidder
1.	Planning, Design, Construction, Restoration and external development of Biplabi Dharanidhara Sangrahalaya at Kusumita Village in Keonjhar District.	Rs.30.80 Crore (Approx.)	S.E., Keonjhar (R&B) Division, Keonjhar	1%	₹ 10,000/-	18 (Eighteen) Calendar Months	Special/ Super Class
2.	Construction of (S+7) Storied Building near MHI for Infrastructure of Centre of Competence, SCB Medical College and Hospital, Cuttack.	Rs.15.50 Crore (Approx.)	S.E., Cuttack (R&B) Division No.-I, Cuttack	1%	₹ 10,000/-	18 (Eighteen) Calendar Months	'A'/ Special Class
3.	Construction of Community Health Centre at Barkote in the district of Deogarh.	Rs.15.42 Crore (Approx.)	S.E., Deogarh (R&B) Division, Deogarh	1%	₹ 10,000/-	18 (Eighteen) Calendar Months	'A'/ Special Class
4.	Construction of Additional Classroom and Auditorium Hall at J. N. College, Mahanga in the district of Cuttack.	Rs.11.40 Crore (Approx.)	S.E., Cuttack (R&B) Division No.-II, Cuttack	1%	₹ 10,000/-	15 (Fifteen) Calendar Months	'A'/ Special Class

1. Bid documents such as DTCN / BOQ etc. can be seen / downloaded from the Govt. Website i.e. www.tendersorissa.gov.in, during the period **dt.27.04.2026 to 17.00 Hours of dt.12.05.2026**.
2. **Online** bids shall be received till **17.00 Hours of dt.12.05.2026**.
3. Bid Security amount & cost of bid document are to be remitted online through a process as mentioned in DTCN.
4. The technical bids will be opened at **11.30 Hours of dt.13.05.2026** in the office of the E.I.C. (Civil) Odisha, Nirman Soudha, Unit-V, Bhubaneswar.
5. The bidder must possess compatible **Digital Signature Certificate (DSC)** of Class – II or Class – III.
6. The authority reserves the right to reject any or all bids without assigning any reason thereof.

Sd/-
Chief Engineer, Buildings-I, Odisha

Memo No.12996

Dt. 15-04-2026

Copy forwarded to the Deputy Secretary to Government, Department of Information Technology, Odisha, Bhubaneswar for publish in the Govt. website for wide circulation.

Sd/-

Chief Engineer, Buildings-I, Odisha

Memo No.12997

Dt. 15-04-2026

Copy forwarded to the Director, Printing Stationery and Publication, Government of Odisha, Madhupatana, Cuttack –10 for information and necessary action. He is requested to arrange for publication of Invitation For Bids (IFB) in next issue of Odisha Gazette.

Sd/-

Chief Engineer, Buildings-I, Odisha

Memo No.12998

Dt. 15-04-2026

Copy submitted to the Principal Secretary to Government of Odisha, Works Department, Bhubaneswar/ Commissioner-cum-Secretary to Govt. H&FW Dept., Odisha for favour of kind information.

Sd/-

Chief Engineer, Buildings-I, Odisha

Memo No.12999

Dt. 15-04-2026

Copy to the Director, Odia Language, Literature & Culture Dept., Odisha, Bhubaneswar/ Director, Medical Education & Training, Odisha for kind information.

Sd/-

Chief Engineer, Buildings-I, Odisha

Memo No.13000

Dt. 15-04-2026

Copy submitted to the Engineer-in-Chief (Civil-cum-Rods), Odisha, Bhubaneswar / Engineer-in-Chief (Designs), Odisha, Bhubaneswar/ E.I.C.-cum-M.D, O.B. & C.C. Ltd., Bhubaneswar / Engineer-in-Chief (RW) Odisha, Bhubaneswar / Engineer-in-Chief, Water Resources, Bhubaneswar for favour of information and wide circulation.

Sd/-

Chief Engineer, Buildings-I, Odisha

Memo No.13001

Dt. 15-04-2026

Copy to the Chief Engineer (Roads-I/II), Odisha / Chief Engineer (Bridges), Odisha / Chief Engineer, R.D.Q. & P, / Chief Engineer, N.H. / Chief Engineer, P.H. (Urban), Odisha, Bhubaneswar for information and wide circulation.

Sd/-

Chief Engineer, Buildings-I, Odisha

Memo No.13002

Dt. 15-04-2026

Copy forwarded to All Collectors / all Chief Construction Engineers under (R&B) / all Chief Construction Engineers under Rural Works / all Chief Construction Engineers under National Highways / all Chief Construction Engineers under Minor Irrigation / all Superintending Engineer / Executive Engineers under (R&B) wing for information and wide publicity.

Sd/-

Chief Engineer, Buildings-I, Odisha

CHECKLIST TO BE ENSURED BY THE BIDDER

Sl. No	Particulars	Reference to DTCN Clause No.	Whether furnished		Reference to Page no.
			Yes	No	
01.	Cost of tender paper ₹.10,000.00 (Online)	No.4			
02.	E.M.D for @1% ₹.11,33,000.00 (Online)	No. 20			
03	Additional Performance Security in case the bid price/rate is less than the estimated cost put to tender as per O.M. No.173 Dtd.03.01.2026 & O.M. No.632 dtd.09.01.2026 of Works Dept., Govt. of Odisha.	No.62.2			
04.	Copy of valid Contractor Registration Certificate	No.5 (i) & 21			
05.	Copy of valid GSTIN	No.5 (i) & 21			
06.	Copy of PAN Card	No.5 (i) & 21			
07.	No Relationship Certificate in Schedule – A	No.35			
08.	Works Experience : List of projects under execution / executed that are similar in nature to the work	Schedule-B & Schedule -D			
09. (A)	Information regarding current litigation, debarring / expelling of the tender or abandonment of the work by the tenderer (Schedule-E)	No.49			
(B)	Affidavit (Schedule-F)	No.49			
10.	a) Electrical License :- • Owned valid Registration in H.T. / L.T./ M.V. Electrical License issued by ELBO, Govt. of Odisha with the same name & style OR • M.O.U. with eligible Registered Electrical Contractors having valid H.T. / L.T./ M.V. license issued by ELBO, Govt. of Odisha OR • for Contractors having License issued by other State Licensing Board should submit an Endorsement as per Clause-27 B of "Electrical Licensing Board Regulation, Odisha, 2014".	No. 8 & 112(d) Schedule - J			
11.	Assessed Available Bid Capacity.	No. 112 (h)			
12.	Similar nature of work.	No. 112 (g)			
13.	Qualification of Key personnel engaged. (Schedule (G))	(Schedule (G))			
14.	Work Programme.				
15.	Tools & Plants and machineries as per the requirement in Schedule-C (Minimum 80% marks to be obtained). (Proof of ownership of Tools & Plants and machineries is to be furnished in shape of copy of invoices / required sale deed in case of 2 nd purchase / required lease deed with owner ship documents of the leaser duly attested.	No.7 & 112(e) & Schedule-C			
	List of plants and equipment	Requirement			
(i)	Water Tanker of 3000liter capacity mounted with Truck / Tractor	2 Nos.			
(ii)	Truck & Tipper	2 Nos.			
(iii)	Welding Machine	1 No.			
(iv)	Generator of minimum 40 KVA capacity and above	1 No.			
(v)	Concrete Ready mix Plant of Capacity 15 cum/hr	1 No.			
(vi)	Concrete Pumping accessories to match with ready mix plant.	1 No.			
(vii)	Concrete Mixer	2 Nos.			
(viii)	a. Concrete Vibrator : Needle type	4 Nos.			
	b. Concrete Vibrator : Plate Type	2 Nos.			
(ix)	Complete staging, shuttering, centering arrangement a.For steel shuttering-Not older than 5 years b.For wooden/Ply shuttering- Not older than 2 years	2000 Sqm. & above			

(x)	5 Ton Capacity Winch Machine (Mechanical/ Power)	1 No.			
(xi)	Water Pump 5 HP Capacity- 1No 1 HP Capacity- 1No	2 Nos.			
16.	e-mail ID &				
	Contact no.				

- N.B:-** (1) The documents uploaded for one bid or part thereof shall not be considered during evaluation of other bid and each bid shall be evaluated as per the documents uploaded for the particular bid.
- (2) Grievance if any from the Bidders or other than the Bidders will be entertained till opening of Price Bid.
- (3) Latest Revisions/Amendments to the Rules and Regulations/ OPWD Code/ Government Circulars/ Notifications of MoSRT & H shall be binding on the Tender/Contract.

CONTRACT DATA

A. GENERAL INFORMATION

SI No	Item	Details
1	Name of the Work	Construction of Additional Classroom and Auditorium Hall at J. N. College, Mahanga in the district of Cuttack.
2.	Employer	Chief Engineer, Buildings-I, Odisha, Bhubaneswar, Works Department
3.	Employer's Representative	Superintending Engineer, Cuttack (R&B) Division No.-II, Cuttack
4	Chief Construction Engineer	Cuttack (R&B) Circle, Cuttack.
6	<u>Estimated Cost</u> <u>(Excluding GST) (In ₹.)</u>	
	Civil Works	₹. 9,98,60,973.00
	EI Works	₹. 49,99,165.00
	PH Works	₹. 84,13,653.00
	Total	₹.11,32,73,791.00

B. BID INFORMATION

7	Intended completion period/Time period assigned for Completion	15 (Fifteen) Calendar Months
8	Last Date & time of submission of Bid	Date:28.05.2026 Time 17.00 hours
9	Cost of Bid Document	
	i Amount as per Clause-4	₹.10,000/-To be remitted Online
10	Bid Security	
	i Amount as per Clause-5	₹.11,33,000.00 To be remitted Online
	ii In favour of	Tender Inviting Authority
	iii Type of instrument	As specified in the bid document.
11	Additional Performance Security	
	i Amount	As specified in the bid document.
	ii In favour of	Superintending Engineer, Cuttack (R&B) Division No.-II, Cuttack
	iii Type of instrument	As specified in the bid document.
11	The Financial years of last five years	2021-22 to 2025-26.
12	Bid validity period	90 days
13	Currency of Contract	Indian Rupee
14	Language of Contract	English

Procedure to participate in online bidding e-procurement

1. PARTICIPATING IN THE BID IN THE E-PROCUREMENT PORTAL: The Contractor/Bidder intending to participate in the bid is required to register in the Portal using his /her active personal/ official e-mail ID as his Login ID and attach his/her valid Digital Signature Certificate (DSC) to his/her unique Login ID. The DSC used must be of appropriate class (Class II or Class III) issued from a registered Certifying Authority such as n-Code, Sify, TCS, MTNL etc. He/ She has to submit the relevant information as asked for about the firm/ contractor. The portal registration of the bidder/ firm is to be authenticated by the State Procurement Cell after verification of original valid certificates/ documents such as (i) PAN and (II) Registration Certificate (RC)/ GST Registration Certificate and GSTIN (for procurement of goods) of the concerned bidder. The time period of validity in the portal is at par with validity of RC/ GST Registration Certificate and GSTIN. Any change of information by the bidder is to be re-authenticated by the State Procurement Cell. After successful authentication bidder can participated in the online bidding process.

Contractor not regisertered with Government of Odisha, can participate in the e-procurement after necessary enrolement in the portal but have to subsequently register themselves with the appropriate registering authority of the Sate Government before award of the work as per prevalent registration norms of the State.

- a. To log on to the portal the Contractor/Bidder is required to type his/her *username* and password. *The system will again ask to* select the DSC and confirm it with the password of DSC. For each login, a user's DSC will be validated against its date of validity and also against the Certificate Revocation List (CRL) of respective CAs stored in system database. The system checks the unique ID, password and DSC combination and authenticates the login process for use of portal.
 - b. The tender documents uploaded by the Tender Inviting Officer in the website <https://tendersodisha.gov.in> will appear in the section of "Upcoming Tender" before the due date of tender sale. Once the due date has arrived, the tender will move to "Active Tender" Section of the *homepage*. Only a small notification will be published in the newspaper specifying the work details along with *mention* of the specific website for details. The publication of the tender will be for specific period of time till the last date of submission of bids as mentioned in the 'Invitation for Bid' after which the same will be removed from the list of Active tenders. Any bidder can view or down load the bid documents from the web site.
 - c. Contractor exempted from payment of EMD will be able to participate in the tender directly by uploading documentary evidences towards his eligibility for such exemption.
 - d. The *software* application has the provision of payment of cost of tender document through payment gateways of *authorized* bankers by directly debiting the account of the bidders.
- 1.1. Furnishing scanned copy of such documents is mandatory along with the tender documents otherwise his/her bid shall be declared as non-responsive and thus liable for rejection. Bidders participating through Joint Venture shall declare the authorized signatory through Memorandum of Understanding duly registered and enroll in the portal in the name and style of the joint venture company. It is mandatory that the DSC issued in the name of the authorized signatory is used in the portal.
 - 1.2. In the case of any failure, malfunction, or breakdown of the electronic system used during the e-procurement process, the tender inviting officer shall not accept any responsibility for failures or breakdowns other than in those systems strictly within their own control.
 - 1.3. Any third party/company/person under a service contract for operation of e-procurement system in the State or his/their subsidiaries or their parent companies shall be ineligible to participate in the procurement processes that are undertaken through the e-procurement system irrespective of who operates the system.

- 1.4. For submission of Bids through the E-Procurement Portal, the bidder shall up load the scanned copy/copies of document in prescribed format wherever warranted in support of eligibility criteria and qualification information. The online bidder shall have to produce the original documents in support of the scanned copies and statements uploaded in the portal before the specified date as per DTCN.
- 1.5. Each bidder shall submit only one bid for one package. A bid is said to be complete if accompanied by cost of bid document and appropriate bid security. The system shall consider only the last bid submitted through the E-Procurement portal.
- 1.6. The bidder may ask question related to tender online in the e-procurement portal using his/her DSC, provided the questions are raised within the period of seeking clarification as mentioned in tender call notice/Bid. The Officer inviting the Bid/ Procurement Officer-Publisher will clarify queries related to the tender.
- 1.7. The details of drawings and documents pertaining to the works available with the officer inviting the Bid as well as in the office of the Chief Construction Engineer and Superintending Engineer/ Executive Engineer as mentioned in the Contract Data will be open for inspection by the bidders. The bidder is required to down load all the documents for preparation of his bid. It is not necessary for the part of the Bidder to up-load other Bid documents (after signing) while up-loading his bid. He is required to up load documents related to his eligibility criteria and qualification information and Bill of Quantities duly filled in. It is assumed that while participating in the bid, the bidder has referred all the drawings and documents. Seeking any revision of rates or backing out of the bid claiming for not having referred to any or all documents provided in the Bid by the Officer Inviting the Bid will be construed as plea to disrupt the bidding process and in such cases the bid security shall be forfeited.
- 1.8. Any addendum / corrigendum/ cancellation of tender shall be published in the website <https://tendersodisha.gov.in> , notice board and through paper publication and such notice shall form part of the bidding documents.

1.8.1. The system generates a mail to those bidders who have already uploaded their tenders and those bidders if they wish can modify their tenders. The bidders are required to check the website till last date and time of bid submission for any addendum/ corrigendum/ cancellation thereof. Tender inviting authority is not responsible for communication failure of system generated mail.

All the volumes/documents shall be uploaded / provided in the portal by the Officer inviting the bid. The bidder shall carefully go through the document and prepare the required documents and up load the scanned documents in Portable Document Format to the portal in the designated locations of Technical Bid. He will fill up the rates of items or percentage in the BOQ down loaded for the work in designated Cell and up loads the same in designated locations of Financial Bid. Bidders are to submit only the original BoQ uploaded by publisher after entering the relevant fields without any alteration/deletion/modification. Multiple BoQ submission shall lead to cancellation of bid. In case of item rate tender, bidders shall fill in their rates other than Zero value in the specified cells. In the percentage rate tender, the bidder quoting Zero value is valid and will be taken as Schedule of Rates. Submission of document shall be effected by using DSC of appropriate class.

2. PAYMENT OF EMD/ BID SECURITY AND COST OF BID DOCUMENTS: The Bidder shall furnish, as part of his Bid, a Bid security for the amount mentioned under NIT/Contract Data in online mode. Non-submission of bid security within the designated period shall debar the bidder from participating in the on-line bidding system and his portal registration shall be cancelled. His name shall also be informed to the registering authority for cancellation of his registration.

2.1 The EMD or Bid Security.

2.2 Deleted.

2.3 The tender accepting authority will verify the originals of all the scanned documents of the successful lowest bidder only within 5 days of opening of the tender (price bid). In the eventuality of failure on the part of the lowest successful bidder to produce the original documents, he will be debarred in future from participating in tender for 3 years and will be black listed by the competent authority. In such a situation, successful L-2 bidder will be required to produce his original documents for consideration of his tender at the negotiated rate equal to L1 bidder.

2.4 Contractor exempted from payment of EMD will be able to participate in the tender directly by uploading documentary evidences towards his eligibility for such exemption.

2.5 Government of Odisha has introduced e-payment gateway in to the portal for payment of cost of Bid and Bid Security/ Earnest Money Deposit. The process of using e-payment gateway is mentioned in the **“Procedure for Electronic receipt, accounting and reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids”**.

3. **FORMAT AND SIGNING OF BID:** (Logging to the Portal)-The Contractor/ Bidder is required to type his/her Login ID and Password. The system will again ask to select the DSC and confirm it with the password of DSC as a second stage authentication. For each login, a user's DSC will be validated against its date of validity and also against the Certificate Revocation List (CRL) of respective CAs stored in system database. The system checks the unique Login ID, Password and DSC combination and authenticates the login process for use of portal.

The bidder can download the tender of his choice and save it in his system and undertake the necessary preparatory work off-line and upload the completed tender at his convenience within the final date and time of submission. The bidder shall only submit single copy of the required documents and Price Bid in the portal. In the Financial bid, the bidder cannot leave any figure blank. He has to only write the figures, the words will be self generated. The Bidders are advised to upload the completed Bid document well ahead of the last date & time of receipt to avoid any last moment problem of power failures etc.

3.1. The Bidder shall go through the Bid carefully and list the documents those are asked for submission. He shall prepare all documents including Declaration form, price bid etc and store in the system.

3.2. The bidder shall log on to the portal with his DSC and move to the desired tender for uploading the documents in appropriate place one by one simultaneously checking the documents. Once the Bidder makes sure that all the documents have been up-loaded in appropriate place he clicks the submit button to submit the bid to the portal.

3.2.1. The bids once submitted can not be retrieved or corrected. Tender cannot be pre-opened and cannot be submitted after due date and time. Therefore only after satisfying that all the documents have been uploaded, the Bidder should activate submit button.

3.2.2. In the e-procurement process each process is time stamped. The system can identify each individual who has entered in to the portal for any bid and the time of entering in to the portal.

3.2.3. The Bidder should ensure clarity of the document uploaded by him to the portal especially the scanned documents by taking out sample printing. Non-submission of legible documents may render the bid non-responsive. However, the Officer inviting the Bid if so desires can ask for legible copies or original copies for verification within a stipulated period provided such document in no way alters the Bidder's price bid. If the Bidder fails to submit the original documents within the stipulated date, his bid security shall be forfeited.

SUBMISSION OF BIDS:-

3.3. The bidder shall carefully go through the tender and prepare the required documents. The bid shall have a Technical Bid and a Financial Bid. The Technical bid generally consists of GSTIN, PAN, Registration Certificate, Affidavits, Profit Loss statement, Joint venture agreement, List of similar nature of works, work in hand, list of machineries and any other information required by OIT. The Financial Bid shall consist of the Bill of Quantities (BOQ) and any other price related information/ undertaking including rebates.

- 3.4. Bidders are to submit only the original BOQ (in .xls format) uploaded by Procurement Officer Publisher (Officer Inviting Tender) after entering the relevant fields without any alteration/ deletion/ modification. Multiple BOQ submission by bidder shall lead to cancellation of bid. In case of items rate tender, bidders shall fill in their rates other than zero value in the specified cells without keeping it blank. In the percentage rate tender the bidder quoting zero percentage is valid and will be taken at par with the estimated rate of the work put to tender.
- 3.5. The bidder shall upload the scanned copy/ copies of document in support of eligibility criteria and qualification information in prescribed format in Portable Document Format (PDF) to the portal in the designated locations of Technical Bid.
- 3.6. The bidder shall write his name in the space provided in the specified location in the Protected Bill of Quantities (BOQ) published by the Officer Inviting Tender. The bidder shall type rates in figure only in the rate column of respective items(s) without any blank cell in the rate column in case of item rate tender and type percentage excess or less up to two decimal place only in case of percentage rate tender.
- 3.7. The bidder shall log to the portal with his/ her DSC and move to the desired tender for up loading the documents in appropriate place one by one simultaneously checking the documents.
- 3.8. Bids cannot be submitted after due date and time. The bids once submitted can not be viewed, retrieved or corrected. The Bidder should ensure correctness of the Bid prior to uploading and take print out of the system generated summary of submission to confirm successful uploading of bid. The bids can not be opened even by the OIT or the Procurement Officer Publisher/ opener before the due date and time of opening.
- 3.9. Each process in the e-procurement is time stamped and the system can defect the time of log in of each user including the Bidder.
- 3.10. The Bidder should ensure clarity/ legibility of the document uploaded by him to the portal.
- 3.11. The system shall require all the mandatory forms and fields filled up by the contractor during the process of submission of the bid/ tender.
- 3.12. The bidder should check the system generated confirmation statement on the status of the submission.
- 3.13. The bidder should upload sufficiently ahead of the bid closure time to avoid traffic rush and failure in the network.
- 3.14. The Tender Inviting Officer is not responsible for any failure, malfunction or breakdown of the electronic system used during the e-procurement process.
- 3.15. The Bidder is required to upload documents related to his eligibility criteria and qualification information and Bill of Quantity duly filled in. It is not necessary for the part of the bidder to upload the drawing and the other Bid documents (after signing) while uploading his bid. It is assumed that the bidder has referred all the drawings and documents uploaded by the Officer Inviting the Bid.
- 3.16. The Bidder will not be able to submit his bid after expiry of the date and time of submission of bid (server time). The date and time of bid submission shall remain unaltered even if the specified date for the submission of bids declared as a holiday for the Officer Inviting the Bid.
- 3.17. The 'Online bidder' shall digitally sign on all statements documents, certificates uploaded by him, owning responsibility for their correctness/ authenticity as per IT ACT 2000. If any of the information furnished by the bidder is found to be false/ fabricated/ bogus, his EMD/BID Security shall stand forfeited and his registration in the portal shall be blocked and the bidder is liable to be blacklisted.

4. SECURITY OF BID SUBMISSION:

- 4.1. All bid data uploaded by the Bidder to the portal will be encrypted by the DSC of the opener(s). The system shall require all the mandatory forms and fields filled up by the contractor during the process of submission of the bid/tender.
- 4.2. The Bid shall be received in encrypted format by the system which can only be decrypted / opened

by the authorized openers only on or after the due date and time.

5. DEADLINE FOR SUBMISSION OF THE BIDS :

- 5.1.** The online bidding will remain active till the last date and time of the bid submission. Once the date and time (Server date and time) is over, the bidder will not be able to submit the bid. The date & time of bid submission shall remain unaltered even if the specified date for the submission of bids declared as a holiday for the Officer inviting the Bid.

RESUBMISSION AND WITHDRAWAL OF BIDS :

- 5.2.** Resubmission of bid by the Bidders for any number of times before the final date and time of submission is allowed.
- 5.3.** Resubmission of bid shall require uploading of all documents including price bid afresh.
- 5.4.** If the bidder fails to submit his modified bids within the pre-defined time of receipt, the system shall consider only the last bid submitted.

6. LATE BIDS :

- 6.1.** The system shall reject submission of any bid through portal after closure of the receipt time. For all purpose the server time displayed in the e-procurement portal shall be the time to be followed by the bidder and concerned officers.

7. MODIFICATION AND WITHDRAWAL OF BIDS :

- 7.1.** In the E-Procurement Portal, it is allowed to modify the bid any number of times before the final date and time of submission. The bidder shall have to log on to the system and resubmit the documents as asked for by the system including the price bid. In doing so, the bids already submitted by the bidder will be removed automatically from the system and the latest bid only will be admitted. But the bidder should avoid modification of bid at the last moment to avoid system failure or malfunction of internet or traffic jam or power failure. If the bidder fails to submit his modified bids within the designated time of receipt, the bid already in the system shall be taken for evaluation.
- 7.2.** In the E-Procurement Portal, withdrawal of bid is allowed. But in such case he has to write a letter with appropriate reasons for his withdrawal addressed to the Officer inviting the bid and upload the scanned document to portal in the respective bid before the closure date and time of receipt of the bid. The system shall not allow any withdrawal after expiry of the closure time of the bid.

8. OPENING OF THE BID:

- 8.1.** Bid opening date is specified during tender creation or can be extended with corrigendum. This date is available in IFB, tender document as well as the home page of portal. Bid opening can be done by the authorized users which are defined during the tender publication / approval stage. The bids are encrypted using their public keys and can be decrypted only on or after the Bid Opening due date and time. The bid openers private key will be required to open the bids and all the openers have to log on to the portal during that time.

8.1.1. The bidders who participated in the on line bidding can witness opening of the bid from any system logging on to the portal with the DSC away from opening place. Contractors are not required to be present during the bid opening at the opening location if they so desire.

8.1.2. Each activity is date and time stamped with user details. For time stamping, server time is taken as the reference.

- 8.2.** In the event of the specified date of bid opening being declared a holiday for the Officer inviting the Bid/Engineer-in-Charge, the bids will be opened at the appointed time on the next working day.
- 8.3.** In case bids are invited for more than one package, the order for opening of the "Bid" shall be that in which they appear in the "Invitation for Bid".
- 8.4.** The Bid openers; who have been pre-defined shall log on to the portal with their respective DSC. Unless all the Officers who have been declared as Opening officers, log on the portal with their DSC the Tender cannot be opened.
- 8.5.** In case of non-responsive tender the officer Inviting tender should complete the e-Procurement

process by uploading the official letter for cancellation/ re-tender.

EVALUATION OF BIDS:-

All the opened bids shall be downloaded and printed for taking up evaluation. The officer authorized to open the tender shall sign and number on each page of the documents downloaded and furnish a certificate that "the documents as available in the portal containing..... nos. of pages".

8.5.1. After opening of technical bid, the bidder may be asked in writing / online (in their registered e-mail ID) to clarify on the uploaded documents provided in the Technical Bid, if necessary, with respect to any doubts or illegible documents required for Technical Evaluation. The Officer Inviting Tender may ask for any other document of historical nature during Technical Evaluation of the tender. Provided in all such cases, furnishing of any document in no way alters the bidders price bid. Non submission of legible documents may render the bid non-responsive. The authority inviting bid may reserve the right to accept any additional document.

8.5.2. The bidders will respond in not more than 7 days of issue of the clarification letter, failing which the bid of the bidder will be evaluated on its own merit

8.5.3. Immediately, on receipt of these clarifications, the Evaluating Officers; predefined in the system for the bid, will finalize the list of responsive bidders. They will log on to the site with their DSC and record their comments on the Technical evaluation page in the system. The Officer Inviting the Bid if also the accepting authority, shall log on to the system with his digital signature and check the technical evaluation. He can either accept or pass on to the evaluating officers for re-evaluation. Upon acceptance of technical evaluation by the Accepting authority in the system, the system shall automatically generate letter to all the responsive bidders and the system shall forward the letter to all the responsive bidder that their technical bid has been evaluated responsive with respect to the data/information furnished by him and the letter shall also intimate him the date & time of opening of financial bid. The system shall also inform the non-responsive bidders in their e-mail ID that their bid has been found non-responsive.

8.6. The Technical evaluation of all the bids shall be carried out up as per the information furnished by the Bidders. But evaluation of the bid does not exonerate the bidders from checking their original documents and if at a later date the bidder is found to have misled the evaluation through wrong information, action as per relevant clause of DTCN shall be taken against the bidder/contractor.

8.7 The Procurement officer-Evaluators will evaluate bid and finalized list of responsive bidders.

Opening of price bid and evaluation of lowest bidder is subject to satisfaction of other qualification information.

8.7.1 The financial bids of the technically responsive bidders shall be opened on the due date of opening. The Procurement Officer-Openers shall log on to the system in sequence and open the financial bids.

8.7.2 The Financial Bid will be opened on the notified date & time in the presence of bidders or their authorised representative who wish to be present.

8.7.3 At the time of opening of "Financial Bid", the names of the bidders whose technical bids were found responsive will be announced and the bids of only those bidders will be opened. The remaining bids will be rejected.

8.7.4 The responsive bidders' name, the bid prices, the item wise rates, the total amount of each item in case the item rate tender and percentage above or less in case of percentage rate tenders will be announced. any discounts and withdrawals, and such other details as the officer inviting the tender may consider appropriate, will be announced by him or his authorized representatives at the time of opening.

8.7.5 Rebate/discount offer if any uploaded to the system shall be declared and recorded first.

- 8.7.6 The Financial bid of the bidders shall be opened one by one by the designated officers. The system shall auto-generate the Comparative statement.
- 8.7.7 The Bidder can witness the principal activities and view the documents/summary reports for that particular work by logging on to the portal with his DSC from anywhere.
- 8.7.8 Procurement Officer-Openers shall sign on each page of the download BOQ and the Comparative Statement and furnish a certificate to that respect.
- 8.7.9 System provides an option to Procurement Officer Publisher for reconsidering the rejected bid with the approval of concern Chief Engineer, Buildings-I, Odisha / Head of Department.

9. CLARIFICATION AND NEGOTIATION OF BIDS:

- 9.1. For examination, evaluation, and comparison of bids, the officer inviting the bid may, at his discretion, ask the lowest bidder for clarification of his rates including reduction of rate on negotiation and breakdowns of unit rates.
- 9.2. On opening of the price bid the system shall arrange the financial bids in order of their value (L1 first, followed by L2, L3) for subsequent evaluation. The evaluation status (Sheet) will be visible to all the participating bidders after opening on their respective logins. Each activity is recorded in the system with date and time stamping.

10. NOTIFICATION OF AWARD AND SIGNING OF AGREEMENT:

- 10.1. In the E-Procurement Portal, the system shall generate the template of award letter and the Officer Inviting the Bid shall mention the amount of Performance Security and additional security required to be furnished in the letter and intimate the bidders in his e-mail ID.
- 10.2. The Employer/ Engineer-in-Charge shall notify acceptance of the work prior to expiry of the validity period by cable, telex or facsimile or e-mail confirmed by registered letter. This letter of Acceptance will state the sum that the Engineer-in-Charge will pay the contractor in consideration of execution and completion of the works by the contractor as prescribed by the contract and the amount of performance security and Additional Performance Security required to be furnished. The issue of the letter of Acceptance shall be treated as closure of the Bid process and commencement of the contract.
- 10.3. The Contractor after furnishing the required acceptable Performance Security and Additional Performance Security, "Letter of Proceed" or "Work Order" shall be issued by the Engineer-in-Charge with copy thereof to the Procurement Officer-Publisher. The Procurement Officer-Publisher shall upload the summary and declare the process as complete.
- 10.4. If the L1 bidder does not turn up for agreement after finalisation of the tender then he shall be debarred from participation in bidding for three years and action will be taken to blacklist the contractor. Besides the consortium/ JV/firm where such an agency/ firm already happens to be or is going to be a partner/ member/ proprietor, he/ they shall neither be allowed for participation in bidding for three years nor his/ their application will be considered for registration and action will be initiated to blacklist him/ them. In that case, the L2 bidder, if fulfils other required criteria would be called for drawing agreement for execution of work subject to condition that the L2 bidder negotiates at par with the quoted by the L1 bidder, otherwise the tender will be cancelled.

11. BLOCKING OF PORTAL REGISTRATION

- 1.1 If the registration Certificate of the contractor is cancelled/ suspended by the registering authority/ blacklisted by the competent authority his portal registration shall be blocked automatically on receipt of information to that effect.
- 1.2 The portal registration blocked in the ground mentioned in the above Para- 11.1 shall be unblocked automatically in receipt of revocation order of cancellation/ suspension/ blacklisting from the concerned authority.

- 1.3 The Officer Inviting Tender shall make due inquiry and issue show cause notice to the concerned contractor who in turn shall furnish his reply, if any, within a fortnight from the date of issue of show cause notice. Thereafter the Officer Inviting Tender is required to issue an intimation to the defaulting bidder about his unsatisfactory reply and recommend to the Chief Manager (Tech) for blocking of portal registration within 10 days of intimation to the defaulting bidder regarding his unsatisfactory reply with intimation to the Registering Authority and concerned Chief Engineer, Buildings-I, Odisha / Heads of Office if any of the following provisions are violated.
- 1.3.1 Fails to furnish original Technical Documents before the designated officer within the stipulated date and time.
- 1.3.2 Backs out from the bid on any day after the last date of receipt of tender till expiry of the bid validity period (including till the extended bid validity period)
- 1.3.3 Fails to execute the agreement within the stipulated date.
- 1.3.4 If any of the information furnished by the bidder is found to be false/ fabricated/ bogus. Accordingly the officer Inviting Tender shall recommended to the Chief Manager (Tech) State Procurement Cell, Odisha for blocking of portal registration of bidder and simultaneously action shall also be initiated by OFFICER INVITING TENDER for blacklisting as per Appendix-XXXIV of OPWD code Volume-II.
- The minimum period of blocking of Portal Registration shall in no case be less than 180 days.

Procedure for Electronic receipt, accounting and reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids

1. The State Government have formulated rules and procedures for Electronic receipt, accounting and reporting of the receipt- of Cost of Tender Paper and Earnest Money Deposit on submission of bids through the e-procurement portal of Government of Odisha i.e. "<https://tendersodisha.gov.in>".
2. Electronic receipt of cost of tender paper has been successfully tested through SBI payment gateway. Now it has been decided to introduce electronic receipt of **Cost of Tender Paper and Earnest Money Deposit on submission of bids** through payment gateway of designated banks such as SBI/ICICI Bank/HDFC Bank for all Government Departments, State PSUs. Statutory Corporations, Autonomous Bodies and Local Bodies etc. in phases (ANNEXURE-I). The process outline as well as accounting and reporting structure are indicated below :
 - a) It will be carried out through a single banking transaction by the bidder for multiple payments like **Cost of Tender Paper and Earnest Money Deposit on submission of bids**.
 - b) Various payment modes like Internet banking/ NEFT/RTGS of Designated Banks and their Aggregator Banks as well can be accessed by the intending bidders.
 - c) Reporting and accounting of the e-receipts will be made from a single source.
 - d) Credit of receipts into the Government accounts and to the designated Bank account of the participating entities indicated in Para 2 above would be faster.
3. Only those bidders who successfully remit their **Cost of Tender Paper and Earnest Money Deposit on submission of bids would be eligible** to participate in the tender/bid process. The bidders with pending or failure payment status shall not be able to submit their bid. Tender inviting authority, State Procurement Cell, NIC, the designated Banks shall not be held responsible for such pendency or failure.
4. **Banking arrangement:**
 - a) Designated Banks (SBI/ICICI Bank/HDFC Bank) payment gateway are being integrated with e-Procurement portal of Government of Odisha (<https://tendersodisha.gov.in>)
 - b) The Designated Banks participating in **Electronic receipt, accounting and reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids** will nominate a Focal Point Branch called e-FPB, who is authorized to collect and collate all e-Receipts. Each such branch will act as the Receiving branch and Focal Point Branch notwithstanding the fact that the bidder might have debited his account in any of the bank's branches while making payment.
5. **Procedures of bid submission using electronic payment of tender paper cost and EMD by bidder:**
 - a) **Log on to e-Procurement Portal:** The bidders have to log onto the Odisha e-Procurement portal (<https://tendersodisha.gov.in>) using his/her digital signature certificate and then search and then select the required active tender from the "Search Active Tender" option. Now, submit button can be clicked against the selected tender so that it comes to the "My Tenders" section.
 - b) **Uploading of Prequalification/Technical/Financial bid:** The bidders have to upload the required Prequalification /Technical/Financial bid, as mentioned in the bidding document and in line with Works Department office memorandum no.7885, dt.23.07.2013.
 - c) **Electronic payment of tender paper cost and EMD:** Then the bidders have to select and submit the bank name as available in the payment options
 - i. A bidder shall make electronic payment using his/her internet banking enabled account with designated Banks or their aggregator banks.
 - ii. A bidder having account in other Banks can make payment using NEFT/RTGS facility of designated Banks.
 - Online NEFT/RTGS payment using internet banking of the bank in which the bidder holds his account, by adding the account number as mentioned in the challan as an interbank beneficiary.
 - d) **Bid submission:** Only after receipt of intimation at the e-Procurement portal regarding successful transaction by bidder the system will activate the 'Freeze Bid Submission' button to conclude the bid submission process.
 - e) **System generated acknowledgement receipt for successful bid submission:** System will generate an acknowledgement receipt for successful bid submission. The bidder should make a note of 'Bid ID' generated in the acknowledgement receipt for tracking their bid status.
6. **Settlement of Cost of Tender Paper;**
 - a) **Cost of Tender Paper:** In respect of Government receipts on account of **Cost of Tender Paper**, the e-Procurement portal shall generate a MIS for the State Procurement Cell (SPC). The MIS will contain an abstract of the cost of tender paper collected with reference to **Bid Identification Number**. The State Procurement Cell shall generate Bank-wise-head-wise challans separately for **Cost of Tender Paper** and instruct the designated Banks to remit the money to the State

Government account under different heads. In respect of the cost of tender paper received through the e-procurement portal, the remittance to the Cyber Treasury account will be made to the Head of Account 0075-Misc, General Services-800-Other Receipts -0097-Misc. Receipts-02237-Cost of Tender Paper.

- b) For the time being, the State Procurement Cell (SPC) will use over the counter payment facility of the Odisha Treasury portal. Thereafter, remittance through NEFT & RTGS will be facilitated through the Odisha Treasury portal.
- c) Similarly, in case of State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc., **Cost of Tender Paper**, the e-Procurement portal shall generate a MIS for the State Procurement Cell (SPC). The MIS will contain an abstract of the cost of tender paper collected with reference to **Bid Identification Number**. The State Procurement Cell shall generate Bank-wise list of challans and instruct the designated Banks to remit the money through the Odisha Treasury portal. The cost of tender papers will be credited to the registered Bank account of the concerned State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc.
- d) Bank will refund (in case the Tender Inviting Authority (TIA) issues such instructions) the tender fee, EMD to the bidder, in case the tender is cancelled before opening of Bid as per direction received from TIA through e-procurement system.
- e) Back-end Transaction Matrix of Electronic receipt of Cost of Tender Paper and Earnest Money Deposit on submission of bids is enclosed in the Annexure.

7. Settlement of Earnest Money Deposit on submission of bids:

- a) The Bank will remit the **Earnest Money Deposit on submission/cancellation of bids** to respective bidders accounts as per direction received from TIA through e-procurement system.

8. Forfeiture of EMD :

Forfeiture of **Earnest Money Deposit on submission of bid** of defaulting bidder is occasioned for various reasons.

- a) In case the **Earnest Money Deposit on submission of bid** is forfeited, the e-Procurement portal will direct the Bank to transfer the EMD value from the Pooling Account of SPC to the registered account of the tender inviting authority.
- b) The Tender inviting authorities of the Government Departments will deposit the forfeited **Earnest Money Deposit on submission of bid**, in the State Government Treasury under the appropriate head (8782-Cash Remittances and Adjustments between the officers rendering accounts to the same Accounts Officer-102-P.W.Remittances-1683-Remittances-91028-Remittances into Treasury) after taking the amount as a revenue receipt in their Cash Book under the head 0075-Misc. General Services-00-101 -Unclaimed Deposits-0097-Misc, Receipts-02080-Misc. Deposits and submit the detail account to DAG (Puri) as a deposit of the Division.
- c) By clicking submit button, system will initiate the forfeiture of EMD. System will not allow the evaluator to edit the initiation after clicking the submit button. Forfeiture option can be carried out in phased manner like one bidder at a time.

9. Role of the Banks:

- a) Make necessary provision / customizations at their end to enable the provision for online payments / refunds as per this document.
- b) Provide necessary real-time message to bidders regarding successful or unsuccessful transactions during online payment processes and redirect them to e-Procurement website with necessary transaction reference details enabling them to submit their bids.
- c) The bank shall ensure transfer of funds from the pooling account to the Government Head/current account of PSUs/ULBs within the next bank working day as per the directions generated from e-Procurement portal.
- d) Bank should provide timely reports and reference details to NIC enabling them to carry out their role as stated below.
- e) e) Refund of amount to bidders as per the XML file provided by e-Procurement system on the next bank working day from the date of generation of the XML file and also provide a confirmation to NIC on the same.

10. Role of State Procurement Cell:

- a) Communicate requirements of Government departments/ State PSUs/ Autonomous Bodies/ ULBs online payment requirements to National Informatics Centre / the authorised Banks for mapping/ customization.
- b) In every working day, the State Procurement Cell shall generate MIS from the e-Procurement portal to ascertain the tender paper cost received in the e-Tendering process separately bank-wise for the Government Department and the PSUs/ULBs. The SPC shall generate bank-wise separate online challans from the Odisha Treasury portal and make the remittance through over the counter facility or NEFT/RTGS (as and when this functionality is available in Treasury portal) and issue instruction to the bank for remittance of the receipt to the State Government account.

- c) The State Procurement Cell shall be responsible for providing challan details and MIS in respect of the remittance towards tender paper cost to the Tender inviting authorities for their record.
 - d) State Procurement Cell shall monitor the progress of e-Tendering by different Government departments / State PSUs/ Autonomous Bodies / ULBs through an MIS. State Procurement Cell shall monitor and send monthly progress reports to the Government.
 - e) The e-Procurement system will generate a consolidated refund & settlement XML file as an end of the day activity.
 - f) e-procurement system will provide a web service for payment gateway (PG) provider to pull the encrypted refund and settlement details in XML file against a day.
 - g) Similarly, payment gateway (PG) provider will provide a web service to pull the refund and settlement status against a day
 - h) e-procurement system will update the status accordingly for reconciliation report.
- 11. Role of National Informatics Centre :**
- a) Customize e-Procurement software and web-pages of Government of Odisha (<https://tendersodisha.gov.in>) to enable the provision for electronic payment.
 - b) The NIC, Odisha will modify / rectify the errors in electronic data relating to the Chart of Account.
 - c) NIC will provide an interface to organizations to download the electronic receipt data.
 - d) Enable automatic generation of daily XML files from e-Procurement system and ensure delivery of the same to the authorized Banks for enabling automatic refund/settlement of funds.
 - e) NIC shall enable the e-Procurement portal to generate MIS as required for the State Procurement Cell in order to make remittance of the tender paper cost to the State Government account using the Odisha Treasury portal.
- 12. Role of Cyber Treasury :**
- a) The cost of the tender paper deposited by the SPC using the Odisha Treasury Portal which will be accounted for by the Cyber Treasury and it shall submit the accounts to A.G (O) as per the established process.
 - b) The Cyber Treasury will provide MIS as required to the SPC for the purpose of accounting and reconciliation of the electronic remittances made to the State Government account.
- 13. Redressal of Public grievances:**
- a) The State Procurement Cell, Odisha, National Informatics Centre, Odisha and the e-FPB will have an effective procedure for dealing with, public complaint for e-Receipt related matters. In case, any mistake is detected by any of the stakeholders in reporting of receipt of tender paper cost and EMD, either suo moto or on being brought to its notice, the State Procurement Cell, Odisha, National Informatics Centre, Odisha unit, Cyber Treasury and the bank will promptly take steps for rectification. The e-Focal Point Branch of the participating Banks, National Informatics Centre, Odisha and the State Procurement Cell, Odisha will notify the contact number and address of the Help Desk for resolution of any dispute regarding e-Receipt.
- 14. Applicability and modification of existing rules / orders:**
- The modalities prescribed in this Office Memorandum for downloading of tender paper, submission and rejection of bid, acceptance of Bids as well as refund and forfeiture of earnest deposit will be applicable for electronic submission of bids through e-procurement portal. Existing provisions regulating cost of tender paper, earnest money deposit in OPWD Code and OGFR would stand modified to the extent prescribed.
- 15.** These arrangements would be made effective after signing of MoU between the designated Banks and the State Procurement Cell, firming up of Banking arrangements and technical integration between designated Bank and e-Procurement Portal.

Back-end Transaction Matrix of Electronic receipt and remittance of Cost of Tender Paper and Earnest Money Deposit on submission of bids.

	Cost of Tender Paper on submission of bids	Earnest Money Deposit on submission of bids
Government Departments	I. The payment towards the cost of Tender Paper, in case Government Departments shall be collected in separate Pooling accounts opened in Focal Point Branch called e-FPB of respective designated banks [as stated in Para 2] at Bhubaneswar on T+1_day. II. With reference to the Notice Inviting Tender/ Bid Identification Number, the amount so realized is to be remitted to Government Account under the Head Of Account 0075-Misc. General Services-800-Other Receipts-0097-Misc. Receipts-02237-Cost of Tender Paper through Odisha Treasury Portal after opening of the bid.	I. In case of tenders of Government Departments, amount towards Earnest Money Deposit on submission of bids shall be collected in a pooling account opened for this purpose at Focal Point Branch called e-FPB of respective designated banks at Bhubaneswar and the banks will remit the amount to respective bidder's account within two working days on receipt of instruction from TIA through refund and settlement of e-procurement system. II. In case of forfeiture of Earnest Money Deposit on submission of bids, the e-Procurement portal will direct the Bank to transfer the EMD value from the Pooling Account of SPC to the registered account of the tender inviting authority within two working days of receipt of instruction from TIA.

	Cost of Tender Paper on submission of bids	Earnest Money Deposit on submission of bids
State PSUs Statutory Corporations, Autonomous Bodies and Local Bodies.	I. In case of State PSUs, Statutory corporations, Autonomous Bodies and Local Bodies etc. the amount towards Cost of Tender Paper, on submission of bids shall be collected in separated pooling accounts opened in Focal Point Branch called e-FPB of respective designated Banks at Bhubaneswar on T+1 days. II. The Paper cost will be transferred to the respective current accounts of concerned State PSUs, Statutory Corporation, Autonomous Bodies and Local Bodies etc. after opening of bid.	I. Amount towards EMD on submission of bids shall be collected in a separate pooling account of Focal Point Branch called e-FPB of respective designated banks at Bhubaneswar and the banks will remit the amount to respective bidder's account on receipt of instruction from TIA through refund and settlement of e-procurement system within two working days from receipt of such instruction. II. In case of forfeiture of Earnest Money deposit on submission of bids, the e-Procurement portal will direct the Bank to transfer the EMD value from the Pooling Account of SPC to the registered account of the tender inviting authority within two working days of receipt of instruction from TIA.

Instruction to Bidders (ITB)

e-procurement

1. NOTICE INVITING BID AND OBTAINING BID DOCUMENTS:

- 1.1. The authority belonging to the major discipline is competent to invite tender of composite bids. He will also nominate the Superintending Engineer/Executive Engineer who will deal with all matters relating to the bids in the invitation of bids.
- 1.2. For composite tender, estimated cost of each component should be clearly indicated in addition to combined estimated cost put to tender. The eligibility of bidders will correspond to the combined estimated cost of different components put to tender.
- 1.3. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules /amendments issued there under from time to time. If he fails to do so, it will be considered a breach of the contract and the Superintending Engineer/Executive Engineer may at his discretion without prejudice to any other right or remedy available under law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation of the provisions of the said Act by him.
- 1.4. The contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Tender and of the rates and prices quoted in the Bill of Quantities, all of which shall, except in so far as it is otherwise provided in the Contract, cover all his obligations under the Contract (including those in respect of the supply of goods, materials, plant & services or of contingencies for which there is a Provisional Sum) and all matters and things necessary for the proper execution and completion of the work and the remedying of any defects therein.
- 1.5. The successful bidder shall complete the works by the intended completion date specified in the Contract data.
- 1.6. Throughout these bidding documents, the terms " bid and tender" EMD and Bid Security and their derivatives (bidder / tenderer, bidding / tendering, etc.) are synonymous.
- 1.7. In case the tender for composite work includes in addition to main work / building work all other ancillary works such as sanitary and water supply installations, drainage installation, electrical work, Firefighting installation, horticulture work, roads and paths and gate works in dams and canals etc. , the bidder apart from being a registered civil Contractor of appropriate class must associate himself with agencies of appropriate class those who is eligible to tender for sanitary and water supply drainage, electrical, Firefighting installation and horticulture works in the composite tender. Intending purchasers are not required to produce any documents viz. copy of Registration, GST Registration certificate & GSTIN etc, at the time of purchase of tender documents but will be required for verification purpose at later stage. Furnishing copy of such documents is mandatory along with the tender documents otherwise his/her bid shall be declared as non-responsive and thus liable for rejection. The L1 Bidder is required to attend the officer inviting the bid for **verification of original documents** within **five days** of opening the Price bid.
- 1.8. PARTICIPATING IN THE BID IN THE E-PROCUREMENT PORTAL: The Contractor/ Bidder intending to participate in the bid is required to register in the Portal with some information about the firm/Contractor. This is a onetime activity for registering in Portal. During registration, the contractor has to attach a Digital Signature Certificate (DSC) to his / her unique user ID. The DSC used must be of appropriate class (Class II or Class III) issued from a registered Certifying Authority such as n-Code, Sify, TCS, MTNL e-Mudra etc.
 - 1.8.1. To log on to the portal the Contractor/Bidder is required to type his/her *username* and password. *The system will again ask to* select the DSC and confirm it with the password of DSC. For each login, a user's DSC will be validated against its date of validity and also against the Certificate Revocation List (CRL) of respective CAs stored in system database. The system checks the unique ID, password and DSC combination and authenticates the login process for use of portal.

- 1.8.2. The tender documents uploaded by the Tender Inviting Officer in the website **www.tendersodisha.gov.in** will appear in the section of “Upcoming Tender” before the due date of tender sale. Once the due date has arrived, the tender will move to “Active Tender” Section of the *homepage*. Only a small notification will be published in the newspaper specifying the work details along with mention of the specific website for details. The publication of the tender will be for specific period of time till the last date of submission of bids as mentioned in the ‘Invitation for Bid’ after which the same will be removed from the list of Active tenders. Any bidder can view or download the bid documents from the web site.
- 1.8.3. Contractor exempted from payment of EMD will be able to participate in the tender directly by uploading documentary evidences towards his eligibility for such exemption.
- 1.8.4. If the software application has the provision of payment of cost of tender document through payment gateways of *authorized* bankers by directly debiting the account of the bidders, bidders will be required to avail on-line payment.
- 1.9. The bidders are to participate in the bid on-line.
- 1.10. **DELETED.**
- 1.11. In the case of any failure, malfunction, or breakdown of the electronic system used during the e-procurement process, the tender inviting officer shall not accept any responsibility for failures or breakdowns other than in those systems strictly within their own control.
- 1.12. Any third party/company/person under a service contract for operation of e-procurement system in the State or his/their subsidiaries or their parent companies shall be ineligible to participate in the procurement processes that are undertaken through the e-procurement system irrespective of who operates the system.

2. ELIGIBLE BIDDERS:

- 2.1. This Bid is open to **all** Contractors of the class mentioned in the *Invitation for Bids* registered with the State Governments and Contractors of Equivalent Grade/ Class Registered with Central Government/ MES/ Railways for execution of civil works. The Bidders are required to enclose the proof of registration from the registering authority along with the Bid subject only to the registration in the portal using his/her DSC for on-line bids.

Contractors not registered with Govt. of Odisha can participate in the e-procurement after necessary enrolment in the portal but have to subsequently register themselves with the appropriate registering authority of the state Govt. before award of the work as per prevalent registration norms of the state.
- 2.2. All bidders *shall* provide a statement that the bidder is neither associated, nor has been associated, directly or indirectly, with the Consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Engineer-in-Charge to provide consulting services for the preparation or supervision of the works, and any of its affiliates shall not be eligible to bid.
- 2.3. If the bidder has a relative employed as an Officer in the rank of an Assistant Engineer/Under Secretary and above in the Government of Odisha in the concerned Department, he shall inform the same in **Schedule-I** of the bid document mentioning the exact details in a covering letter along with the tender, failing which his bid will not be considered. Also if the fact of relationship subsequently comes to light, his contract will be rescinded. The bid security or the performance security will be forfeited and he shall be liable to make good any loss or damage resulting from such cancellation. In case the bidder has no relationship with any of the officers mentioned above he shall have to furnish with his bid an undertaking to that effect.
- 2.4. He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the concerned Department. Any breach of this condition by the contractor would render him liable for penal action for suppression of facts.

- 2.5. No Engineer of gazetted rank or other gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the Government of Odisha is allowed to work for contractor for a period of two years after his retirement from Government service, without prior permission of the Government of Odisha in writing. Such a contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of Odisha as aforesaid before submission of the tender for engagement in the contractor's service.

3. QUALIFICATION CRITERIA:

- 3.1. For submission of Bids through the E-Procurement Portal, the bidder shall up-load the scanned copy/copies of documents listed under clause 3.2 in prescribed format wherever warranted in support of eligibility criteria and qualification information. **The L-1 bidder shall have to produce the original documents in support of the scanned copies and statements uploaded in the portal within 5 days of opening of price bid.** The Bids from Joint ventures are not acceptable.
- 3.2. The bid shall include following information and documents.
- (a) Copy of valid contractor's registration certificate, PAN card, GST Registration certificate & GSTIN should accompany the technical bid.
 - (b) Copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory.
 - (c) Major construction equipment to be deployed to carry out the Contract. The contractors are required to furnish evidence of ownership of principal machineries / equipments for only those machineries / equipments asked for in the tender documents.
 - (d) In case if contractor executing several works, he is required to furnish a time schedule for movement of equipment/machinery from different site to this work site when work is to be executed.
 - (e) The contractor shall furnish ownership documents for those machineries which he is planning to deploy for the tendered work.
 - (f) deleted.
 - (g) The contractor intending to use/lease equipments/machineries are required to furnish proof of ownership from the company/persons providing equipment/ lease deed and duration of such contract.
 - (h) **M.O.U. with eligible Registered Electrical Contractors having valid H.T. / L.T./ M.V. license issued by Govt. of Odisha OR Owned valid Registration in H.T. / L.T./ M.V. Electrical License issued by Govt. of Odisha with the same name & style OR for Contractors having License issued by other State Licensing Board should submit an Endorsement as per Clause-27 B of "Electrical Licensing Board Regulation, Odisha, 2014"**
 - (i) Details of work under progress as per tender documents.
 - (j) Details of works executed during the last five years and works in hand (list of on-going works as per bid documents).
 - (k) The bidder is required to furnish MOU with professional Firm or body having experience in handling Fire safety services for design, construction and commissioning High rise/Old age home/ Buildings/ Hospitals / Apartments along with Registration certificate of Firm for Installation & Commissioning of Fire safety services
- 3.3. **DELETED**
- 3.4. *The Bidders are subject to be disqualified if they have:*
- a. Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
 - b. Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.; and/or
 - c. Participated in the previous bidding for the same work and had quoted unreasonable prices and could not furnish rational justification to the Engineer-in-Charge.
 - d. Indulged in unlawful & corrupt means in obtaining bids.
 - e. Been black listed/their registrations by the competent authority.

4. ONE BID PER BIDDER:

- 4.1. Each bidder shall submit only one bid for one package. A bid is said to be responsive if accompanied by cost of bid document and appropriate bid security. The system shall consider only the last bid submitted through the E-Procurement portal.

5. COST OF BIDDING:

- 5.1. The bidder shall bear all costs associated with the preparation and submission of his bid, and the Engineer-in-Charge will in no case be responsible and liable for those costs.
- 5.2. All the rates and prices in the bid shall cover all taxes, GST Registration certificate & GSTIN, ferry, tollage charges and royalties and any other charges except GST.
- 5.3. The rate of royalties and taxes prevailing on the date of measurement shall be considered while making deductions in the bills.
- 5.4. The successful bidder shall make his own arrangement for all materials unless otherwise specified in the conditions of contract.

6. SITE VISIT:

- 6.1. Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A Bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The Bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of work.
- 6.2. The bidder, in preparing the bid, shall rely on site Investigation Reports referred to in the Contract Data, supplemented by any information available to the bidder.
- 6.3. The Officer inviting the bid / Engineer-in-Charge will clarify queries on the Contract Data on requisition by the intending Bidder. The bidder may ask question in the e-procurement portal using his DSC; provided the questions are raised before the date mentioned in the home page under critical dates.

B. BIDDING DOCUMENTS

7. GENERAL INSTRUCTIONS:

- 7.1. The description of the work is as mentioned under Invitation for Bid.
- 7.2. The bids uploaded by the Tender Inviting Officer may consist of general arrangements drawings or typical sections of the project. Bidder may down load these drawings and take out the print for detail study. Any other drawings and documents pertaining to the works available with the officer inviting the Bid as well as in the office of the Superintending Engineer/Executive Engineer as mentioned in the contract data will be open for inspection during working hours on all working days by the bidders. The bidder is required to down-load all the documents including the drawings for preparation of his bid. It is not necessary on the part of the Bidder to up-load the drawings other Bid documents (after signing) while up-loading his bid. He is required to up load documents related to his qualification information and Bill of Quantities duly filled in. It is assumed that while participating in the bid, the bidder has referred to all the drawings and documents uploaded by the Officer Inviting the Bids. Seeking any revision of rates or backing out of the bid claiming for not having referred to any or all documents provided in the Bid document by the Officer Inviting the Bids will be construed as plea to disrupt the bidding process and in such cases the bid security shall be forfeited.

- 7.3. The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, and technical specifications, bill of quantities, forms, Annexes and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk.

8. CLARIFICATION OF BIDDING DOCUMENTS:

- 8.1. Bid documents consisting of drawings, plans, specifications, the schedule of quantities of the various items of work to be done and the set of terms & conditions of contract to be complied with by the contractor who intends to bid and other necessary Documents can be seen in the office of the officer inviting the Bid during office hours everyday except on Sundays & Public Holidays till last date of sale of tender paper.
- 8.2. **No paper copy of the bid shall be sold.**
- 8.3. The Contract Data to bid shall be filled and completed in the office of Officer inviting bid before issue of bid documents. If the documents are issued to the intending bidder without having been so filled in & completed, he shall request the officer inviting the bid to have this done before he completes and delivers his bid.
- 8.4. **The bidder can seek clarification on the bids** which he received earlier than 15 days prior to the deadline for submission of bids. The Employer's response will be forwarded through the e-mail ID of the enquirer.
- 8.5. **PRE-BID MEETING: DELETED**

9. AMENDMENT OF BIDDING DOCUMENTS:

- 9.1. Before **the** deadline for submission of bids, the officer inviting the Bid may modify the bidding documents by issuing addenda.
- 9.2. Any **addendum** thus issued shall be part of the bidding documents and shall be notified in the website **www.tendersOdisha.gov.in** / notice board and through paper publication.
- 9.3. To give **prospective** bidders reasonable time in which to take an addendum into account in preparing their bids, the Officer inviting the Bid if also happens to be the Engineer-in-Charge with the permission of the higher authority may, at his discretion, extend as necessary the dead line for submission of bids.

C. PREPARATION OF BIDS

10. LANGUAGE OF THE BID:

- 10.1. All documents relating to the Bid shall be in the English / Hindi / Oriya language. Bids submitted in any other language shall be summarily rejected.

11. DOCUMENTS COMPRISING THE BID:

- 11.1. Following documents will be deemed to be part of the bid even if not submitted with the bid.
- (i) Invitation for Bids (IFB)
 - (ii) Instructions to bidders (ITB)
 - (iii) Conditions of Contract
 - (iv) Contract Data
 - (v) Specifications
 - (vi) Drawings
- 11.2. All the volumes/documents shall be provided in the portal by the Officer inviting the bid. The bidder shall carefully go through the document and prepare the required documents and up load the scanned documents in Portable Document Format to the portal in the designated locations of Technical Bid. He will fill up the percentage rate in the BOQ down loaded for the work in designated Cell and up-load the same in designated locations of Financial Bid. Submission of document shall be effected by using DSC of appropriate class.
- A. **Cost of "Bid document" & "Bid Security"** shall be remitted online using e-procurement Gateway.
- B. **"Technical Bid"** shall comprise.

- (i) Declaration under the Official Secret Act, 1923
 - (ii) Qualification Information and supporting documents,
 - (iii) Certificates, undertakings, affidavits,
- C. **“Financial Bid”** shall comprise.
- (i) Priced Bill of Quantities

12. PROPOSAL BY THE BIDDER:

- 12.1. **In the E-Procurement Portal**, an intelligent Bill of Quantity in Microsoft Excel format shall be made available to the bidder.
- 12.2. For **Item rate** tenders, the bidder shall fill in rates in figures and should not leave any cell blank. The line item total in words and the total amount shall be calculated by the system and shall be visible to the bidder.
- 12.3. In case of **percentage rate** tender, the bidder will only fill in the designated cell and activate “less” or “excess” to indicate how much his price offer is excess or less (**Up to two decimal Place**) than the estimated amount.
- 12.4. The **bidder** shall bid for the whole works as described in the Bill of Quantities.
- 12.5. Bidders **shall** submit offers that fully comply with the requirements of the bidding documents, Including the Conditions of Contract basic technical design as indicated in the drawing and specification. **Conditional offer or alternative offers will not be considered** in the process of bid evaluation.
- 12.6. All duties, taxes, excluding GST including Building and other Construction Workers Welfare Cess @ 1% payable by the contractor under the contract, or for any other cause shall be included in the rates, prices submitted by the bidder. Taxes on material in respect of this contract shall be payable by the Contractor and Government will not entertain any claim whatsoever in respect of the same except GST payable for works contract.
- 12.7. In the case of any bid where unit rate of any item/items appear unrealistic, such bid will be considered as unbalanced and in case the bidder is unable to provide satisfactory explanation such a tender is liable to be disqualified and rejected.
- 12.8. Bidders while quoting their offers shall consider the following as regards price adjustment towards **Cement, Steel & Bitumen** and escalation of **all components** of work **as per Sub-Clause 31 of Condition of P-1 Contract**.
- 12.9. **Deleted.**
- 12.10. **Deleted.**
- 12.11. **Deleted.**
- 12.12. **Deleted**
- 12.13. The contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Tender and of the rates and prices stated in the Bill of Quantities, all of which shall, except in so far as it is otherwise provided in the Contract, cover all his obligations under the Contract (including those in respect of the supply of goods, materials, plant & services or of contingencies for which there is a **Provisional** Sum) and all matters and things necessary for the proper execution and completion of the work and the remedying of any defects therein.
- 12.14. The **contractor shall** conform in all respects, by giving all notices and paying all fees, with the provisions of:
 - i) Any national or State Statue, Ordinance, or other Law, or any regulation, or bye-law of any local or other duly constituted authority in relation to the execution and completion of the works and remedying of any defects therein, and
 - ii) The rules and regulations of all public bodies and companies whose property rights are affected or may be affected in any way by the works.
- 12.15. **FOR COMPOSITE BIDS: DELETED.**

13. CURRENCIES OF BID AND PAYMENT:

- 13.1. The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees. All payments shall be made in Indian Rupees.

14. VALIDITY:

- 14.1. Bids shall remain valid for a period not less than **90 days** or the period mentioned in the Contract Data, after the deadline date for submission of bid as specified in the notice inviting the Bids. A Bid valid for a shorter period shall be rejected by the Engineer-in-charge as non-responsive.
- 14.2. In exceptional circumstances, prior to expiry of the original time limit, the Officer inviting the Bid may request the bidders to extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable or by e-mail.
- 14.3. **DELETED.**

15. BID SECURITY:

- 15.1. The Bidder shall remit a bid security for the amount mentioned under Contract Data.
- The successful lowest bidder will produce the original of all scanned documents for verification within 5 days of opening of the tender (Price Bid). In the eventuality of failure on the part of the lowest successful bidder to produce the original documents, he will be debarred in future from participating in tender for three years and will be blacklisted by the competent authority. In such a situation, successful L-2 bidder will be required to produce his original documents for consideration of his/her tender at the negotiated rate equal to L-1 bidder.**
- 15.1.1. **DELETED**
- 15.1.2. **DELETED.**
- 15.1.3. **DELETED**
- 15.2. The Bid shall be declared non-responsive and shall be rejected if submitted without an acceptable Bid Security and not secured as indicated in Sub-Clauses 15.1.
- 15.3. Combined bid security for more than one work is not acceptable.
- 15.4. In the case of Government Undertakings, Co-operatives Societies, Diploma or Degree holders in Engineering who are registered with the Government of Odisha, the rules framed by government from time to time about Cost of Bid documents, Bid security, performance security will apply.
- 15.5. The bid Security of unsuccessful bidders will be returned within 28 days of the end of the validity period specified in Sub-Clause 14.1.
- 15.6. The Bid Security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required Performance Security and Additional Performance security if any
- 15.7. The Bid Security may be forfeited.**
- 15.7.1. If the bidder withdraws the bid after opening of the bid but within the period of validity.
- 15.7.2. If the Bidder seeks any revision of rates or backs out of the bid claiming for not having referred to any or all documents provided in the Bid by the Officer Inviting the Bids.
- 15.7.3. **DELETED.**
- 15.7.4. In the case of a successful bidder, if the bidder fails within the specified time limit to
- 15.7.4.1. Sign the Agreement; or
- 15.7.4.2. Furnish the required Performance Security including additional performance security if any.

16. FORMAT AND SIGNING OF BID:

- 16.1. The bidder can download the tender of his choice and save it in his system and undertake the necessary preparatory work off-line and upload the completed tender at his convenience within the final date and time of submission. The bidder shall only submit single copy of the

required documents and Price Bid in the portal. In the Financial bid, the bidder cannot leave any figure blank. He has to only write the figures, the words will be self-generated. The Bidders are advised to up-load the completed Bid document well ahead of the last date & time of receipt to avoid any last moment problem of power failures etc.

- 16.2. The Bidder shall go through the Bid carefully and list the documents those are asked for submission. He shall prepare all documents including cost of Bid Document, Bid Security, Declaration form, price bid etc and store in the system.
- 16.3. The bidder shall log on to the portal with his DSC and move to the desired tender for up-loading the documents in appropriate place one by one simultaneously checking the documents. Once the Bidder makes sure that all the documents have been up-loaded in appropriate place, he clicks the submit button to submit the bid to the portal.
 - 16.3.1. Tender cannot be pre-opened and cannot be submitted after due date and time. Therefore, only after satisfying that all the documents have been uploaded, the Bidder should activate submit button.
 - 16.3.2. In the e-procurement process, each process is time stamped. The system can identify each individual who has entered into the portal for any bid and the time of entering into the portal.
 - 16.3.3. The Bidder should ensure clarity of the document up-loaded by him to the portal, especially the scanned documents by taking out sample printing. Non-submission of legible documents may render the bid non-responsive. However, the Officer inviting the Bids if so desires, **can ask for legible copies for clarification within a stipulated period of 7 days**, provided such document in no way alters the Bidder's price bid. **If the Bidder fails to submit Such documents with in the stipulated date, his bid shall be evaluated on it's own merit.**

D. SUBMISSION OF BIDS

17. SECURITY OF BID SUBMISSION:

- 17.1. All bid data uploaded by the Bidder to the portal will be encrypted by the DSC of the opener(s). The system shall require all the mandatory forms and fields filled up by the contractor during the process of submission of the bid/tender.
- 17.2. The Bid shall be received in encrypted format by the system which can only be decrypted / opened by the authorized openers only on or after the due date and time.

18. DEADLINE FOR SUBMISSION OF THE BIDS :

- 18.1. The online bidding will remain active till the last date and time of the bid submission. Once the date and time (Server date and time) is over, the bidder will not be able to submit the bid. The date & time of bid submission shall remain unaltered even if the specified date for the submission of bids declared a holiday for the Officer inviting the Bid.
- 18.2. The officer inviting the bid may extend the deadline for submission of bids by issuing an amendment in accordance with Sub-Clause 9.3, in which case all rights and obligations of the officer inviting the bid & Engineer-in-Charge and the bidders previously subject to the original deadline will then be subject to the new deadline.

19. LATE BIDS :

- 19.1. The system shall reject submission of any bid through portal after closure of the receipt time. For all purpose the server time displayed in the e-procurement portal shall be the time to be followed by the bidder and concerned officers.

20. MODIFICATION AND WITHDRAWAL OF BIDS :

- 20.1. In the E-Procurement Portal, it is allowed to modify the bid any number of times before the final date and time of submission. The bidder shall have to log on to the system and resubmit the documents as asked for by the system including the price bid. In doing so, the bids already submitted by the bidder will be removed automatically from the system and the latest bid only will be admitted. But the bidder should avoid modification of bid at the last moment to avoid system failure or malfunction of internet or traffic jam or power failure. If the

bidder fails to submit his modified bids within the designated time of receipt, the bid already in the system shall be taken for evaluation.

- 20.2. In the E-Procurement Portal, with-drawl of bid is allowed. But in such case he has to write a letter with appropriate reasons for his withdrawal addressed to the Officer inviting the bid and up load the scanned document to portal in the respective bid before the closure of receipt of the bid. The system shall not allow any withdrawal after expiry of the closure time of the bid.

E. OPENING AND EVALUATION

21. OPENING OF THE BID:

- 21.1. Bid opening dates are specified during tender creation or can be extended vide corrigendum. These dates are available in IFB , tender document as well as the home page of portal. Bid opening can be done by the authorized users which are defined during the tender publication / approval stage. The bids are encrypted using there public keys and can be decrypted only on or after the Bid Opening due date. The bid openers private key will be required to open the bids and all the openers have to log on to the portal during that time.
- 21.1.1. The bidders who participated in the on line bidding can witness opening of the bid from any system logging on to the portal with the DSC away from opening place. Contractors are not required to be present during the bid opening at the opening location if they so desire.
- 21.1.2. Each activity is date and time stamped with **user** details. For time stamping, server time is taken as the reference.
- 21.2. In the event of the specified date of bid opening being declared a holiday for the Officer inviting the Bid/Engineer-in-Charge, the bids will be opened at the appointed time on the **next working day**.
- 21.3. In case bids are invited for more than one package, the order for opening of the "Bid" shall be that in which they appear in the "Invitation for Bid".
- 21.4. The Bid openers; who have been pre-defined shall log on to the portal with their respective DSC. Unless all the Officers who have been declared as Opening officers, log on the portal with their DSC the Tender cannot be opened.
- 21.4.1. **After receipt of confirmation of the bid security**, the bidder will be asked in writing to clarify his technical bid, if necessary.
- 21.4.2. The bidders will respond in **not more than 7 days** of issue of the clarification letter, which will also indicate the date, time and venue of opening of the Financial Bid.
- 21.4.3. Immediately on receipt of these clarifications, the Evaluating Officers; predefined in the system for the bid, will finalize the list of responsive bidders. They will log on to the site with their DSC and record their comments on the Technical evaluation page in the system. The Officer Inviting the Bid if also the accepting authority, shall log on to the system with his digital signature and check the technical evaluation. He can either accept or pass on to the evaluating officers for re-evaluation. Upon acceptance of technical evaluation by the Accepting authority in the system, the system shall automatically generate letter to all the responsive bidders and the system shall forward the letter to all the responsive bidder that their technical bid has been evaluated responsive with respect to the data/information furnished by him and the letter shall also intimate him the date & time of opening of financial bid. The system shall also inform the non-responsive bidders in their email ID that their bid has been found non-responsive.
- 21.5. The Technical evaluation of all the bids will be taken up as per the information furnished by the Bidders. **If any of the information/ statements/documents/certificates furnished by the bidder is found to be false/fabricated/bogus, his EMD/Bid Security shall stand forfeited and his registration in the portal shall be blocked and the bidder is liable to be blacklisted.**
- 21.6. After **technical** evaluation of the bidders and selection of the qualified bidders, the financial bids of the technically qualified bidders shall be opened on the due date of opening.

Members of the bid opening committee log on to the system in sequence and open the financial bids for the technically qualified bidders. The opening of financial bid by the opening officer using their DSC shall decrypt the financial bids.

- 21.6.1. Opening of price bid and evaluation of lowest bidder is subject to satisfaction of other qualification information asked for in the bid pursuant to Clause-3.
- 21.6.2. The Officer inviting Bid shall ensure that all the Bidders are individually intimated about the date, time & venue of opening of the financial bid along with the responsiveness of the Technical Bid.
- 21.6.3. The Financial Bid will be opened on the notified date & time in the presence of bidders or their authorized representative who wish to be present.
- 21.6.4. At the time of opening of "Financial Bid", the names of the bidders whose bids were found responsive in accordance with Sub-Clause 24.1 will be announced. The bids of only those bidders will be opened. The remaining bids will be rejected.
- 21.6.5. The responsive bidders' names, the bid prices, the item wise rates the total amount of each item, any discounts and withdrawals, and such other details as the officer inviting the tender may consider appropriate, will be announced by him or his authorized representatives at the opening.
- 21.6.6. Special conditions and/or rebate/discount offer if any uploaded to the system shall be declared and recorded first.
- 21.6.7. The Financial bid of the bidders shall be opened one by one by the designated officers. **The system shall auto-generate the Comparative statement.**
- 21.6.8. The Bidder can witness the principal activities and view the documents/summary reports for that particular work by logging on to the portal with his DSC from anywhere.

22. PROCESS TO BE CONFIDENTIAL:

- 22.1. Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the officer inviting the bid, processing of bids or award decisions may result in the rejection of his bid.

23. CLARIFICATION OF BIDS:

- 23.1. To assist in the examination, evaluation, and comparison of bids, the officer inviting the bid may, at his discretion, ask any bidder for clarification of his rates including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable or by e-mail, but no change in the bid price or substance of the bid shall be sought, offered.
- 23.2. Subject to sub-clause 23.1, no bidder shall contact the officer inviting the bid on any matter relating to his bid from the time of the opening to the time the contract is awarded. If the bidder wishes to bring additional information to the notice of the officer inviting the bid, it should do so in writing.

24. EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS:

- 24.1. During the detailed evaluation of "Technical Bids", the officer inviting the bid will determine whether each bid:-
 - 24.1.1. Whether the Bid security is confirmed by issuing institution/bank.
 - 24.1.2. Has submitted legible documents for evaluation
 - 24.1.3. Meets the eligibility criteria defined in *Clause 3* and;
 - 24.1.4. Is substantially responsive to the requirements of the bidding documents.
- 24.2. During the detailed evaluation of the "Financial Bid", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications and drawings.

- 24.3. A substantially responsive “Financial Bids” is one, which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one
- 24.3.1. Which affects in any substantial way the scope, quality, or performance of the works?
- 24.3.2. Which limits in any substantial way, inconsistent with the bidding documents, the right of the officer inviting the bid or the bidder’s obligations under the contract or
- 24.3.3. Whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.
- 24.4. If a “Financial Bid” is not substantially responsive, it will be rejected by the officer inviting the bid, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.
- 24.5. On opening of the price bid the system shall arrange the financial bids in order of their value (L1 first, followed by L2, L3) for subsequent evaluation. The evaluation status (Sheet) will be visible to all the participating bidders after opening on their respective logins. Each activity is recorded in the system with date and time stamping.

25. EVALUATION OF BIDS: DELETED

- 25.1. If the officer **inviting** the Bid in his opinion judges that the price quoted by the lowest qualified bidder is high or a special condition imposed by the bidder is to be withdrawn, the bidder shall be invited for negotiation by the officer inviting the Bid or by an officer authorised by him in writing. **Negotiations** of financial bid with **only the lowest bidder** shall be carried out, if necessary. Negotiation of bid will be carried out by manual way.
- 25.2. **DELETED.**
- 25.3. **DELETED**
- 25.4. **DELETED.**
- 25.5. **DELETED.**

F. AWARD OF CONTRACT

26. AWARD CRITERIA:

- 26.1. The officer inviting the bid will award the contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated price.
- 26.2. On acceptance of the tender, the Contractor shall name in writing his accredited representative(s) who would be responsible for taking instructions from the Engineer-in-Charge.
- 26.3. Competent Authority on behalf of Governor of Odisha reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.
- 26.4. The successful bidder registered under other State Government / MES / Railways / CPWD in equivalent rank has to register under state PWD before signing of the agreement.

27. OPTIONS IF THE BIDDER BACKS OUT FROM BIDDING PROCESS :

- 27.1. In case the 1st lowest Bidder or even the next lowest Bidder withdraw in series one by one, thereby facilitating a particular Bidder for award, then they shall be penalized with adequate disincentives with forfeiture of EMD/Bid Security unless adequate justification for such back out is furnished. Appropriate action for blacklisting the bidder shall also be taken apart from dis-incentivising the bidder.
- 27.2. The bidding process shall be deemed to be complete till the date of issue of letter of acceptance. If the bidder fails to sign the agreement within the stipulated period mentioned under clause 29.2, his bid security shall stand forfeited.

28. RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS :

- 28.1. The competent authority on behalf of the Governor of Odisha does not bind him to accept the lowest or any other tender and reserves to him the authority to reject any or all the tenders received without assigning any reason.
- 28.2. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.

29. NOTIFICATION OF AWARD AND SIGNING OF AGREEMENT:

- 29.1. In the E-Procurement Portal, the system shall generate the template of award letter and the Officer Inviting the Bid shall mention the amount of Performance Security and additional security required to be furnished in the letter and intimate the bidders in his e-mail ID. The issue of the letter of acceptance shall be treated as closure of the Bid process and commencement of the contract.
- 29.2. The bidder shall within 15 days of issue of letter of acceptance, furnish the Performance security & additional Performance security (if any) in the prescribed form & the work programme & shall sign the agreement in prescribed format, failing which the Engineer-in-Charge shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the Bid Security absolutely. The agreement will incorporate all agreements between the officer inviting the bid and the successful bidder.

If L1 bidder does not turn up for agreement after finalization of the tender, then he shall be debarred from participation in bidding for three years and action will be taken to blacklist the contractor. In that case, the L2 bidder, if fulfils, other required criteria would be called for drawing agreement for execution of work subject to the condition that L2 bidder negotiates at par with the rate quoted by the L1 bidder otherwise the tender will be cancelled. In case a contractor is black listed, it will be widely published and intimated to all departments of Government and also to Govt. of India agencies working in the state.

(Amendment to Para-3.5.14 Note-I of OPWD Code Vol.-I by inclusion).

29.2.1. Following documents shall form part of the agreement.

29.2.1.1. The notice inviting bid, all the documents including additional conditions, specifications and drawings, if any, forming the bid as issued at the time of invitation of bid and acceptance thereof together with any correspondence & documents leading thereto & required amount of performance security including additional performance security as per sub clause 29.2 hereof.

29.2.1.2. Standard Bid Document P.W.D. Form **P-1**

- 29.3. The letter to proceed with the work shall be issued by Engineer-in-charge only after signing of the agreement. The notification of award will constitute the formation of the contract subject only to the furnishing of performance security and additional performance security in accordance with the provisions of the agreement.
- 29.4. On acceptance of the composite bids by the competent authority the letter of award will be issued by the Engineer-in-Charge of the major component of the work on behalf of the Governor of Odisha.
- 29.5. Upon signing of the agreement by the successful bidder, the Engineer-in-Charge will promptly notify the other bidders that their bids have been unsuccessful.

30. CORRUPT OR FRAUDULENT PRACTICES:

- 30.1. The Engineer-in-Charge will reject a proposal for award if he determines that the bidder recommended for award has been engaged in corrupt or fraudulent practices in competing for the contract in question. He will report to the Officer Inviting Bid / next higher authority.
- 30.2. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable for rejection.

DETAILED TENDER CALL NOTICE

1. Sealed **percentage rate** bids are invited **online in double cover system** from the Class of eligible contractors registered with the State Government and contractors of equivalent Grade / class registered with Central Government / MES / Railways having registration for Civil, Electrical and P.H. works for execution of Civil / E.I. / P.H. works on production of definite proof from the appropriate authority in prescribed form to be eventually drawn in P.W.D. FORM P-1 for the work “**Construction of Additional Classroom and Auditorium Hall at J. N. College, Mahanga in the district of Cuttack**” at an estimated cost of **₹.11,32,73,791/- (Rupees Eleven Crore Thirty-two Lakh Seventy-three Thousand Seven Hundred Ninety-one) only (Excluding GST)**. Contractors not registered with Govt. of Odisha can participate in the e-procurement after necessary enrolment in the portal but have to subsequently register themselves with the appropriate registering authority of the state Govt. before award of the work as per prevalent registration norms of the state.
 - a) This tender is of composite nature and consisting of Civil works, Electrical and PH works.
 - b) This detailed Tender Call Notice along with the clauses mentioned herein shall form a part of the contract and agreement.
2. The Bid documents are available on official website of Government: <https://www.tendersodisha.gov.in> from **dt.12.05.2026 to 17:00 hours of dt.28.05.2026**. The last date and time of submission of Bid is as per contract data.
3. The Technical Bid documents (**Cover-I**) will be opened by the assigned officer in the office of the Engineer-in-Chief (Civil), Odisha, Bhubaneswar at **11.30 Hours on dt.29.05.2026** in the presence of the bidders or their authorized representatives who wish to attend. After evaluation of the documents contained in Cover-I, the Cover-II containing price bid/s of the technically responsive bidder/s will be opened. The date, time and place of opening the price bid will be intimated to the eligible qualified bidders through system generated E-mails.
4. The cost of Bid documents is to be remitted online through e-payment gateway for **₹.10,000/-** towards the paper cost of each bid respectively.
5. The bid is to be submitted in two covers.
 - i) **Cover-I is to contain scanned copy of Contractor Registration Certificate, GST Registration Certificate, GSTIN, PAN, Profit Loss statement, M.O.U. with eligible Registered Electrical Contractors having valid H.T. / L.T./ M.V. license issued by Govt. of Odisha OR Owned valid Registration in H.T. / L.T./ M.V. Electrical License issued by Govt. of Odisha with the same name & style OR for Contractors having License issued by other State Licensing Board should submit an Endorsement as per Clause-27 B of “Electrical Licensing Board Regulation, Odisha, 2014. List of similar nature of works, work in hand, list of machineries, affidavit, and all other documents required as per the relevant clauses of this DTCN. The contractor belonging to outside state of Odisha and not started business should submit an undertaking in the form of an Affidavit indicating therein that they are not registered under Odisha GSTIN as they have not started any business in the state and they have no liability under the Act. But before award of final contract, such bidders will have to produce the Odisha GSTIN.**
 - ii) **Cover-II** is to contain the **PRICE BID** duly filled in and signed by the bidder as per the relevant clauses of this DTCN.
6. Furnishing scanned legible copy of Original Contractor Registration certificate, valid GSTIN, PAN card along with the Technical Bid is mandatory otherwise his/ her bid shall be declared as non-responsive and thus liable for rejection.
7. (i) **The Contractors are required to furnish scanned copy of evidence of ownership showing the possession of principal machineries/equipments as per Annexure-I in Schedule-C for which contractor shall have to secure minimum 80% of marks failing which the tender shall be liable for rejection.**

- (ii) In case the contractor proposes to engage machineries and equipments as asked for in the tender document, owned or hired but deployed outside the State, the entire bid security shall stand forfeited in case the contractor fails to mobilize the machineries within a period as to be able to execute an item of work as per original programme which will be part of the agreement.
- (iii) The contractor intending to hire/lease equipments/machineries are required to furnish proof of ownership from the company/ person providing equipments/ machineries on hire/lease along with contracts/ agreements/lease deed and duration of such contract. The contracts/agreements/lease deed should be on long term basis for a minimum period of **18 (Eighteen)** months as mentioned in contract data from the last date of receipt of Bid documents. **The name of work as mentioned in NIT should be entered in contracts/agreements/lease deed, otherwise the bid shall be treated as ineligible.**

8. (i) **The Civil contractor in order to take part in the composite tender should enter into an M.O.U. (Memorandum of Understanding duly notarized) with eligible Registered Electrical Contractor having valid H.T. / L.T./ M.V. License issued by Govt. of Odisha for execution of Electrical installation and other electrical works and a copy of such M.O.U. should be attached with the tender as per the proforma at Schedule- J which shall form a part of tender. A copy of Electrical License should also be enclosed with the tender papers, the original of which need to be furnished during verification. The above M.O.U. is not required in case of the Civil Contractor having valid registration in H.T. / L.T./ M.V. Electrical License issued by Govt. of Odisha with the same name & style.**

(ii) **The Civil Contractor having Electrical contractor license issued by licensing board of other States will be allowed to take up the work in the State of Odisha through endorsement subject to fulfilment of the conditions laid down in Clause-27 B (Endorsement of Outside Contractor license issued by other State Licensing Board) of “Electrical Licensing Board Regulation, Odisha, 2014” issued vide Energy Department, Govt. of Odisha Notification No.9553 Dtd.03.12.2014. (as per Clause-27 B of APPENDIX-A enclosed).**

9. (i) The contract will be drawn in P.W.D. **P-1** contract form and will constitute 3 parts as follows.
- a. Part – I : For Civil items of works
 - b. Part – II : For Electrical items of works
 - c. Part – III : For PH items of works

The contract shall be drawn & signed by **S.E., Cuttack (R&B) Division No.-II, Cuttack** on behalf of the Governor of Odisha.

(ii) The Civil items of works as per Part-I of Schedule of quantities, Electrical items of works (both internal & external) as per part-II of Schedules of quantities and P.H. items of works (both internal & external) as per Part-III of the Scheduled of quantities of the Agreement shall be supervised measured and check measured by the **S.E., Cuttack (R&B) Division No.-II, Cuttack and Superintending Engineer, General Public Health Division No-I, Bhubaneswar** respectively. In the interest of expeditious execution of work, payment of interim bills (Running A/c bills) shall be made by the **Superintending Engineer, General Public Health Division No-I, Bhubaneswar** in respect of Public Health works and nil final bill shall be sent to the concerned **S.E., Cuttack (R&B) Division No.-II, Cuttack** for final adjustment and compilation of accounts.

S.E., Cuttack (R&B) Division No.-II, Cuttack and **Superintending Engineer, General Public Health Division No-I, Bhubaneswar** shall be responsible for proper and timely execution of their respective items of works and implementation of the terms and condition of the contract. The contractor shall be bound to receive and act as well according to the direction of the Engineer-in-Charge for General Electrical / General Public Health Authority concerned.

10. If an individual makes the application, the individual should sign (with DSC) above his full type written name and current address.
11. If the application is made by proprietary firm, it shall be signed (with DSC) by the proprietor & furnish full type written name and the full name of his firm with its current address in a forwarding letter.
12. If the application is made by a firm in partnership, it shall be signed (with DSC) by a partner holding power of attorney for the firm in which case a certified copy of the power of attorney shall accompany the application. A certified copy of the partnership deed and current address of all partners of the firm shall also accompany the application.
13. If the application is made by a limited company or a corporation, it shall be signed (with DSC) by a duly authorized person holding power of attorney for signing the application in which case a certified copy of the power of attorney shall accompany the application. Such limited company or corporation will be required to furnish satisfactory evidence of its existence along with the technical bid.
14. The tender should be strictly in accordance with the provisions as mentioned in the tender schedule. Any change in the wordings will not be accepted.
15. The work is to be completed in all respects within **Fifteen (15)** calendar months from the date of issue of work order. Before acceptance of tender, the successful bidder will be required to submit a work programme and milestone basing on the financial achievement so as to complete the work within the stipulated time and in case of failure on the part of the agency to achieve the milestone liquidated damage will be imposed
(Amendment to Para-3.5.18 Note-VIII of OPWD Code Vol.-I).
16. All tenders received will remain **valid for a period of 90 days** from the last date prescribed for receipt of tenders and validity of tenders can also be extended if agreed by the tenderers and the Department.
17. The tenderer shall carefully study the tentative drawings and specifications applicable to the contract and all the documents, which will form a part of the agreement to be entered in to, by the accepted tenderer and detailed specifications for Odisha, and other relevant specifications and drawings, which are available. Complaint at a future date that the tenderers have not seen plans and specifications cannot be entertained.
18. The drawings furnished with the tender are tentative and subject to revision or modification as tendered during the execution as per actual necessity and detail test conducted. But the tendered rates quoted by the tenderer will hold good in case of such modification of drawings during the time of execution and shall in no way invalidate the contract and no extra monetary compensation will be entertained. The work shall however be executed as per final approved drawing to be issued by the Engineer-in-Charge as and when required.
19. By admission of a tender for the work, a tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the work, about the quality and availability of the required quantity of material including the wheat/ rice referred to above, medical aid, labour and food stuff etc., and that rates quoted by him in the tender will be adequate to complete the work according to the specifications attached there to and that he had taken in to account all conditions and difficulties that may be encountered during its progress and to have quoted rates including labour and materials with taxes, octroi, other duties, lead, lifts, loading and unloading, freight for all materials and all other charges necessary for the completion of the work, to the entire satisfaction of the Engineer-in-Charge of the work and his authorized subordinates. After acceptance of the contract rate Government will not pay any extra charges for any reason in case the contractor claims later on to have misjudged as regard availability of materials, labour and other factors.

For the purpose of estimate, the approved quarry lead is to be provided judiciously. Engineers in charge would be responsible for ensuring the quality of the materials supplied. The contractors would, however, be responsible for procurement of material from authorized sources and voluntarily disclose the source of procurement for the purpose of billing. Besides, the bidder would be required to submit the details of quarry for procurement while submitting the bids.

(Amendment to Para-3.4.16 (a) (vii) of OPWD Code Vol.-I by substitution).

20. The bidders shall remit the EMD / Bid Security amount @ 1% (One percent) of the estimated cost put to tender of ₹.11,32,73,791/- rounded to thousand rupees i.e. ₹.11,33,000/- (Rupees Eleven lakh Thirty-three thousand) only through Online as part of the bid.
21. The tender should be accompanied with the *Scanned copies of the valid Contractor Registration certificate, GST Registration Certificate, GSTIN and PAN card* which are mandatory, otherwise his/her bid shall be declared as non-responsive and thus liable for rejection. The contractor belonging to outside state of Odisha and not started business should submit an undertaking in the form of an Affidavit indicating therein that they are not registered under Odisha GSTIN as they have not started any business in the state and they have no liability under the Act. But before award of final contract, such bidders will have to produce the Odisha GSTIN.
22. The tender containing extraneous conditions not covered by the tender notice are liable for rejection and quotations should be strictly in accordance with the items mentioned in the Tender Call Notices. Any change in the wording will not be accepted.
23. The department reserves the right of authority to reject any or all tenders received without assigning any reason whatsoever.
24. The earnest money of the L-1 bidder will be retained and will be dealt with as per terms and condition of O.P.W.D. Code. The retention of E.M.D. with the Department will carry no interest.
25. The Engineer-in-charge will notify the bidder / tenderer whose bid has been accepted of the award prior to expiration of the validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the conditions of Contract called the "Letter of Acceptance") will state the sum that the Engineer-in-charge will pay the contractor in consideration of the execution, completion and maintenance of the Works by the contractor as prescribed by the contract (Hereinafter and in the contract called the "Contract Price").

The Notification of award will constitute the formation of the contract, subject only to the furnishing of a performance security (Initial Security Deposit) in shape of **Kissan Vikash Patra / Post Office Saving Bank Account / National Saving Certificate / Post Office Time Deposit Account / Bank Guarantee in favour of the Superintending Engineer, Cuttack (R&B) Division No.-II, Cuttack**, from any Nationalized / scheduled Bank in India counter guaranteed by its local branch at Bhubaneswar as per terms and conditions laid down in OGFR and in no other form. (As per O.M No.14468 dtd.20.09.2018 of Works DepttGovt of Odisha), which shall be 2% of the value of the tendered amount and sign the agreement in the P.W.D. form No. P-1 (Schedule XLV No. 61) for the fulfillment of the contract in the office of the **Superintending Engineer, Cuttack (R&B) Division No.-II, Cuttack**. The security deposit and the amount withheld according to the provision of P-1 agreement shall be retained as security for the due fulfillment of this contract and additional performance security in accordance with the provisions of the agreement.

The agreement will incorporate all agreements between the officer inviting the bid/ Engineer-in Charge and the successful bidder within 15 days following the notification of award along with the Letter of Acceptance. The successful bidder will sign the agreement and deliver it to the Engineer-in Charge. Following documents shall form part of the agreement.

- a) The notice-inviting bid, all the documents including additional conditions, specifications and drawings, if any, forming the bid as issued at the time of invitation of bid and acceptance thereof together with any correspondence leading thereto & required amount of performance security including additional performance security.
- b) Standard **P.W.D. Form P-1 with latest amendments**. Failure to enter in to the required agreement and to make the security deposit as above shall entail forfeiture of the Bid Security (earnest money) .No contract (tender) shall be finally accepted until the required amount of initial security money is deposited. The security will be refunded after **12 (Twelve) months** of completion of the work and payment of the final bill and will not carry any interest. As concurred by Law Department & Finance Department In their U.O.R. No 848, dt.21.05.97 J.O.R.No.202 W.F.D. dtd.06.03.98 respectively the E.M.D. will be forfeited

in case, where tenderers back out from the offer before acceptance of tender by the competent authority.

26. The contractor should be liable to fully indemnify the Department for payment of compensation under workmen compensation act. VIII of 1923 on account of the workmen employed by the contractor and full amount of compensation paid will be recovered from the contractor.
27. Tenderers are required to liable by fair wages clause as introduced by Govt. of Odisha, Works Department letter No.VII (R&B) 5225, dt.26.2.55 and No.II, M-56/61-28842 (5), dt.27.9.61.
28. The contractor shall bear cost of various incidentals, sundries and contingencies necessitated by work in full within the following or similar category.
- a) Rent, royalties, cessand other charges of materials and all other taxes including GST from time to time, Ferry tolls, conveyance charges and other cost on account of land buildings including temporary building required by the tenderer for collection of materials, storage, housing of staff or other purpose of the work are to be borne by the contractor at his own cost. No rent will be payable to Govt. for temporary occupation of land owned by govt. at the site of the work for bonafide use of the land for work and all such construction of temporary nature by the contractor shall be done after obtaining written permission from the Engineer-in-Charge of the work and all such construction shall have to be demolished and debris removed and ground made good and cleared after completion of the work at no extra cost.
 - b) Royalty will be recovered from each bill as notified by Govt. from time to time unless K Forms are enclosed. Refund of royalty at later date after passing of the bills cannot be entertained as the recovery of royalty is being credited to revenue.
 - c) Labour camps or huts necessary to a suitable scale including conservancy and sanitary arrangements therein to the satisfaction of the local labour laws and health authorities shall have to be provided by the Contractor.
 - d) Arrangement of suitable water supply including pipe water supply where available for the staff and labour as well as for the execution of the work is sole responsibility of the Contractor and no extra cost for carriage of water will be entertained. e) All fees and dues levied by Municipal, Canal or Water Supply Authorities are to be borne by the Contractor.
 - f) Suitable safety equipments and dresses, gloves, life belts etc. for the labour engaged in risky operations are to be supplied by the contractor at his own cost.
 - g) Suitable fencing barriers, signals including paraffin and electric signals where necessary at work and approaches in order in project the public and employees from accident has to be provided by the Contractor at his own cost.
 - h) Compensation including cost of any legal suit for injury to persons or property arising out of execution of the work and also any sum, which may become payable due to operation of the workmen compensation act, shall have to be borne by the contractor.
 - i) The contractor has to arrange adequate lighting arrangements for the work wherever necessary at his own cost.
29. No payment will be made for layout, benchmark, level pillars, profiles and benching and leveling the ground required, which has to be carried out by the contractor at his own cost. The rates to be quoted should be for finished items of work inclusive of carriage of all materials and all incidental items of work.
30. After the work is finished all surplus materials should be removed from the site of work, preliminary work such as vats, mixing platforms, etc. should be dismantled and all materials removed from the site and premises left neat and his should be inclusive in the rates. No extra payment will be made to the Contractor in this account.
31. It should be understood clearly that no claim what-so-ever will be entertained to extra items of works quantity of any item besides estimate amount unless written order is obtained from the competent authority and rate settled before the extra items of work or extra quantity of any items of work is taken up.
32. The tenderers shall have to abide by the C.P.W.D. safety code rules introduced by the Govt.of India, Ministry of Works and Housing & Supply in their standing order No.44150, dt.25.11.57.

- 33.** No part of the contract shall be sublet without written permission to the concerned Superintending Engineer/Executive Engineer or transfer to be made by the power of attorney authorizing others to receive payment on contractor's behalf.
- 34.** Bid documents consisting of plans, specifications, the schedule of quantities and the set of terms and conditions of contract and other necessary documents can be seen in all the offices issuing the documents and office of the under signed during office hours every day except on Sundays and Public Holidays till last date of sale and receipt of tender papers. Interested bidders may obtain further information at the same address. But it must be clearly understood that tenders must be received in order and according to instructions in complete shape. Incomplete tender is liable for rejection.
- 35. No Relation certificate.**
The contractor shall furnish a certificate along with the tender to the effect that he is not related to any officer in the rank of an Assistant Engineer & above in the state P.W.D. or Assistant/Under Secretary & above in the Works Department. If the fact subsequently proved to be false, the contract is liable to be rescinded. The earnest money & the total security will be forfeited & he shall be liable of make good to damages the loss or damages resulting for such cancellations. The proforma for no relationship certificate is contained in a separate sheet vide **Schedule-A**.
- 36. Payment for variation in price -**
Contract price shall be adjusted for increase or decrease in rates and price of Labour, Cement, Steel, Bitumen, Pipes, POL & other material component in accordance with the following principles and procedures as per formula Vide **Works Department Memorandum No-15847 /W dt.19.11.2019** as given below :

Clause 31 :- Price Adjustment

31.1 : Contract price shall be adjusted for increase or decrease in rates and price of labour, materials, fuels and lubricants in accordance with the following principles and procedures and as per formula given in following Paras.

(a) The price adjustment shall apply for the work done from the start date given in the contract data up to end of the initial intended completion date or extensions granted by the Engineer and shall not apply to the work carried out beyond the stipulated time for reasons attributable to the contractor.

(b) The price adjustment shall be determined during each month from the formula given in following Paras

(c) Following expressions and meanings are assigned to the work done during each month:

R= Total value of work done during the month. It would include the amount of secured advance granted, if any, during the month, less the amount of secured advance recovered, if any during the month. It will exclude value for works executed for extra items under variations.

31.2 : To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs

The formula (e) for adjustment of prices are:

31(a) (i): Adjustment of Other Materials Component

Price adjustment for increase or decrease in cost of local materials other than cement, steel, bitumen, pipe and POL procured by the contractor shall be paid in accordance with the following formula:

$$V_M = 0.85 \times P_m / 100 \times R \times (M_1 - M_0) / M_0$$

V_M = Increase or decrease in the cost of work during the month under consideration due to Changes in rates for local materials other than cement, steel, bitumen and POL.

M_0 = The all India wholesale price index (all commodities) on 28 days preceding the date of opening of Bids, as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

M_1 = The all India wholesale price index: (all commodities) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

P_m = Percentage of local material component (other than cement, steel, bitumen and POL) of the work.

31(a)(ii): Adjustment for Cement Component

Price adjustment for increase or decrease in the cost of cement procured by the contractor shall be paid in accordance with the following formula:

$$V_c = 0.85 \times P_c / 100 \times R \times (C_1 - C_0) / C_0$$

V_c = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for cement

C_0 = The all India wholesale price index for Ordinary Portland Cement (OPC) on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

C_1 = The all India wholesale price index for Ordinary Portland Cement (OPC) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

P_c = Percentage of Cement Component of the work

31(a)(iii): Adjustment for Steel Component

(iii) Price adjustment for increase or decrease in the cost of steel procured by the contractor shall be paid in accordance with the following formula:

$$V_s = 0.85 \times P_s / 100 \times R \times (S_1 - S_0) / S_0$$

V_s = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for steel

- S₀= The all India wholesale price index for steel (Mild Steel long products) on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.
- S₁= The all India wholesale price index for steel (Mild Steel long products) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.
- P_s= Percentage of steel component of the work

Note: For the application of this clause, index of (Mild Steel long products) has been chosen to represent steel group.

31(a)(iv): Adjustment of Bitumen Component

Price adjustment for increase or decrease in the cost of bitumen shall be paid in accordance with the following formula:

$$V_b = 0.85 \times P_b / 100 \times R \times (B_1 - B_0) / B_0$$

V_b= Increase or decrease in the cost of work during the month under consideration due to changes in the rate for bitumen.

B₀ = The official retail price of bulk bitumen at the IOC/ BPCL depot at nearest center on the day 28 days prior to date of opening of Bids.

B₁ = The official retail price of bulk bitumen at IOC/ BPCL depot at nearest center for the 15th day of the month under consideration.

P_b= Percentage of bitumen component of the work

31(a)(v): Adjustment towards differential cost of Pipes.

Price adjustment for increase or decrease in the cost of pipe shall be paid in accordance with the following formula:

$$V_{pi} = 0.85 \times P_{pi} / 100 \times R \times (P_{i1} - P_{i0}) / P_{i0}$$

V_{pi}= Differential cost of pipe i.e. amount of increase or decrease in rupees to be paid or recovered during the month under consideration.

P_{pi} = Percentage of pipe component of the work

P_{i1} = All India Whole sale price index of pipe for the period under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

P_{i0} = All India Whole sale price index of pipe on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

31(b): Adjustment of Labour Component

Price adjustment for increase or decrease in the cost due to labour shall be paid in accordance with the following formula:

$$V_L = 0.85 \times P_l / 100 \times R \times (L_1 - L_0) / L_0$$

V_L= Increase or decrease in the cost of work during the month under consideration due to changes in rates for local labour.

L₀ = The minimum wages for unskilled labour as Notified by Government of Odisha as prevailed on the last stipulated date of receipt of tender including extension, if any.

L₁ = The minimum wages for unskilled labour as Notified by Government of Odisha as prevailed on the last date of the Month previous to the one under consideration.

P₁ = Percentage of labour component of the work.

31(c): Adjustment of POL (fuel and lubricant) Component

(v) Price adjustment for increase or decrease in cost POL (fuel and lubricant) shall be paid in accordance with the following formula:

$$V_f = 0.85 \times P_f / 100 \times R \times (F_1 - F_0) / F_0$$

V_f= Increase or decrease in the cost of work during the month under consideration due to changes in the rates for fuel and lubricants.

- F_0 = The official retail price of High Speed Diesel (HSD) at the existing consumer pumps of IOC / BPCL/ HPCL at nearest center on the day 28 days prior to the date of opening of Bids.
- F_1 = The official retail price of HSD at the existing consumer pumps of IOC / BPCL / HPCL at nearest center for the 15th day of the month under consideration.
- P_f = Percentage of fuel and lubricants component of the work

Note: For the application of this clause, the price of High Speed Diesel oil has been chosen to represent fuel and lubricants group.

31(d): Adjustment for Plant and Machinery Spares Component

- (vi) Price adjustment for increase or decrease in the cost of plant and machinery spares procured by the Contractor shall be paid in accordance with the following formula:
- $V_p = 0.85 \times P_p / 100 \times R \times (P_1 - P_0) / P_0$
- V_p - Increase or decrease in the cost of work during the month under consideration due to changes in the rates for plant and machinery spares
- P_0 - The all India wholesale price index for manufacture of machinery for mining, quarrying and construction on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.
- P_1 - The all India wholesale price index for manufacture of machinery for mining, quarrying and construction for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.
- P_p - Percentage of plant and machinery spares component of the work

Note: For the application of this clause, index of manufacturing of machinery for mining, quarrying and construction has been chosen to represent the Plant and machinery Spares group.

Regarding wholesale price Index (WPI) for appropriate commodity for payment of price adjustment, due to change of base year of WPI from 1993-94 to 2004-05 & 2011-12, it is observed that, the commodity 'Bars and Rod', 'Cement', 'Heavy machinery and parts' included in the list of WPI 1993-94 series are not mentioned as such in the WPI 2004-05 & 2011-12 series. Therefore, the following items in the WPI 2004-05 & 2011-12 series shall be considered corresponding to items in WPI 1993-94 series:

Sl. No.	Item in WPI 1993-94 series	Item in WPI 2004-05 series	Item in WPI 2011-12 series
1.	Cement	Grey Cement	Ordinary Port Land Cement
2.	Bars & Rods	Rebars	Mild Steel Long Products
3.	Heavy Machinery & parts	Construction Machinery	Manufacture of machinery for mining, quarrying & construction.

31(e): APPLICATION OF ESCALATION CLAUSE:

The contractor shall for the purpose of availing reimbursement/refund of differential cost of steel, bitumen, cement, pipe, POL and wages, keep such books of account and other documents as are necessary to show that the amount of increase claimed or reduction available and shall allow inspection of the same by a duly authorized representative of Government and further, shall at the request of the Engineer-in-Charge, furnish documents to be verified in such a manner as the Engineer-in-Charge may require any document and information kept. The contractor shall within a reasonable time of 15 days of his becoming aware of any alteration in the price of such material, wages of labour and for price of P.O.L. give notice thereof to the Engineer-in-Charge stating that the same is given pursuant to this condition along with information relating to there to which he may be in a position to supply.

Percentage Table

Sl. No.	Category of Works		% Component (Cost Wise)		
			Labour (P ₁)	POL (P ₁)	Steel (P _s) + Cement (P _c) + Bitumen (P _b) + Pipes (P _{pi}) + Plant & Machinery Spare & Component (P _p) + Other Materials*
1	R&B Works (% of component)	Road Works	5	5	90
		Bridge Works	5	5	90
		Building Works	5	5	90
2	Irrigation works (% of component)	Structural Work	5	5	90
		Earth, Canal & Embankment work	5	5	90
3	P. H. Work	Structural Work	5	5	90
		Pipeline Work	5	5	Pipe - 70% *Machinery + Other Material – 20%
		Sewer Line	5	5	Pipe - 70% *Machinery + Other Material – 20%

*Note:- Further break up may be worked out considering the consumption of Cement, Steel, Bitumen, pipe and Plant & Machinery Spare Component in the concerned works and shall be provided in the bid document in shape of **"Schedule of Adjustment Data"** as an **"Appendix to Bid"**, (enclosed herewith).

**Appendix to Bid
Schedule of Adjustment Data**

[For all works, adjustment factor for Labour and POL shall be considered @ 5% each. Steel, Cement, Pipes, other Materials and Machinery shall contribute to 90% of Price Adjustment and shall be calculated for each work separately during preparation of estimate, shall be approved by the authority during technical sanction as a "Schedule of Adjustment Data" and shall form part of the Bid Document]

Cl. No.-31 of F2/P1 Contracts Sl. No.	Index description	Source of Index	Base value*	Base Date*	Weightage of Item**
31 (a)(i)	Other Materials	All India whole sale price index (all commodities) as published by the Economic Advisor to the Govt. Of India, Ministry of Commerce and Industry.			66.50%
31 (a)(ii)	Cement	Whole sale price index for Cement (Ordinary Portland Cement) as published by the office the Economic Advisor to the Govt. Of India, Ministry of Commerce and Industry.			2.60%
31 (a)(iii)	Steel	Whole sale price index for steel (Mild Steel-Long Products) as published by the office of the Economic Advisor to the Govt. Of India, Ministry of Commerce and Industry.			20.21%
31 (a)(iv)	Bitumen (VG-30)	Official retail price of bulk bitumen at the nearest IOC/ HPCL depot.			-
31 (a)(v)	Pipes	Whole sale price index for the type of Pipe under consideration, as published by the office the Economic Advisor to the Govt. Of India. Ministry of Commerce and Industry.			0.69%
31 (b)	Labour	Minimum Wage notified by the Labour and Employee's State Insurance Department of Government of Odisha, India.			5%
31 (c)	POL	Official retail price of HSD at nearest IOCL/ HPCL/ BPCL Consumer pump depot.			5%
31 (d)	Plant and Machinery	Whole sale price index for Manufacture of Machinery for Mining, Quarrying and Construction as published by the office the Economic Advisor to the Govt. Of India, Ministry of Commerce and Industry.			0.01%
			Total		100%

* Values to be filled up at the time of drawl of contract

*** Values to be filled up in the bid document.

37. If any advance / Secured advance is granted by the Department the same will bear interest at the rate of 18% P.A.
38. All items of work as per schedule of quantities of this tender should confirm to Odisha Detailed Standard Specification. I.R.C. & I.S.I. Codes & Bridge code section I,II,III,IV&VII & latest design criteria for pre-stressed concrete bridge specially for Roads & Bridges issued by MoRT&H., Government of India, Compacting shall have to be carried out with help of mechanical vibrators from the range of I.S.:2505, I.S.:2006, I.S.:2514. I.S.:4656.

39. Centering & Shuttering shall be with suitable steel shutters in side of which shall be lined with suitable sheeting and made leak proof and watertight. All joints in formwork shall be properly sealed preferably with P.V.C. joints sealing tapes & compounds.
40. Form work including complete false work shall be designed by the Contractor without any extra cost to employer and the Department will have the right to inspect the scaffolding, centering and shuttering made for the work and can reject partly or fully such structures, if found defective in their opinion. Any eventually such as loss of lives or property due to failure of centering and shuttering shall be the responsibility of the Contractor regarding compensation of all claims thereof.
41. Cement shall be used by bags and weight of one bag of Cement should be 50 (fifty) Kg. net & the Engineer-in-Charge or his representative shall have the right to test the weight & quality from time to time.
42. The tenderers shall make all arrangements for proper storage of materials but no cost for raising shed for store and pay of security guard etc. will be borne by the Department. The department is not responsible for any theft or loss of materials at site. It is contractor's risk. Under any such plea, if the tenderer stops the work he shall have to pay the full penalty as per clauses of the contract.
43. Approach road to site of work for transport of materials to site of work is sole responsibility of the Contractor. Statutory traffic restriction in the town area for Transport of construction material to site of work is to be taken in to consideration before tendering and no consideration for extra time or compensation thereof shall be considered.
44. The contractor should at his own cost arrange necessary tools and plants required for efficient execution of work and the rates quoted should be inclusive of transportation, hire and running charges of such plant and cost of consumables.
45. The contractor shall properly co-ordinate with the execution of P.H. and Electrical works and take care of the safety of workers.
46. The machineries if available, with the department may be supplied on hire as per charges noted in the enclosed statement and may be changed from time to time subject to the condition that the contractor will execute in advance an agreement with the Engineer-in-Charge.
47. No claim whatsoever will be entertained for supply of machineries. No extension of time will be granted to the contractor under this ground under any circumstances
48. The tenderer should furnish along with their tender a list of works executed during the last five years duly certified by the concerned Engineer-in-charge indicating the satisfactory completion for Civil, P.H. & Electrical works as per the proforma enclosed in a separate sheet of **Schedule-D**.
49. The tenderer or any of its constituent partners of whose contract for any work has been rescinded or who has abandoned any work in the last five years prior to the date of Bid shall be debarred from qualification. The tenderer is to furnish an affidavit at the time of submission of tender paper about the authentication of tender documents. An affidavit to this effect is to be furnished in **Schedule-F** and information in **Schedule-E**
50. It should be clearly understood that :
- a) The joints of the bars are to be provided with lapping, welds or bolts nuts as well be directed by the Engineer-in-charge.
 - b) Concrete test specimens 150mm × 150mm × 150mm in size (whether plain or reinforced concrete) for the testing shall be taken for each structural member by a representative of the contractor in the presence of responsible officer of the rank not lower than that of an Assistant Engineer or sub-Divisional Officer. The contractor shall bear the cost so involved in testing. The test specimen in cube should be carried out in the Departmental Control and Research Laboratory of Cuttack or Bhubaneswar. Test should be carried out in accordance with the stipulation in Bridges code section-III.
 - c) Test specimens shall be formed carefully in accordance with the standard method of taking test specimen and no plea shall be entertained later on the grounds that the casting of the

test specimen was faulty and that the result of the specimen did not give a correct indication of the actual quality of concrete.

- d) Plain concrete and reinforced concrete specimens will be tested in **Quality Control and Research Laboratory as per direction of Engineer-in-charge**. Cost of testing of all specimens and samples will be borne by the Contractor.

51. The rates quoted should be inclusive of carriage of water required in connection with execution of the work. No claim for carriage of water whatsoever will be entertained.
52. The contractor shall employ one or more Engineering Graduate or Diploma holders as apprentice at his cost if the work as shown in the tender exceeds ₹.2,50,000.00. The apprentices will be selected by the Chief Engineer, Buildings-I, Odisha. The period of employment will commence within one month after the date of work order and would last till the date, when 90% of the work is completed. The fair wage to be paid to the apprentices should not be less than the emolument of personnel of equivalent qualification employed under Government. The number of apprentices to be employed should be fixed by the Chief Engineer, Buildings-I, Odisha in the manner so that the total expenditure does not exceed one percent of the tendered cost of the work.
53. List of tool & plants in running condition in possession of contractor is to be furnished in a separate sheet of **Schedule-C**.
54. It is the responsibility of the contractor to procure and store explosive required for blasting operation. Department may render necessary possible help for procuring license.
55. For submission of a tender for the work, the tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the work about the quality and availability of the required quantity of materials, Medical aid, labour and Flood stuff etc. and that the rates quoted by him in the tender will be adequate to complete the work according to the specifications attached thereto and that he had taken in to account all conditions and difficulties that may be encountered during its progress and to have quoted labour rates and materials with taxes, Octoroi and other duties lead, lifts, loading and unloading freight for materials and all other charges necessary for the completion of the work to the entire satisfaction of the Engineer-in-charge of the work and his authorized subordinates. After acceptance of the contract rates Government will not pay any extra charges for any reason in case the contractor finds later on to have misjudged the conditions as regards the availability of materials, labour and other factors. The contractor will be responsible for any misuse, loss or damages due to any reasons whatsoever of any departmental material during the execution of work. In case of loss, damage or misuse, recovery at the rate at 5 times the cost of the materials will be deducted from the bills or his other dues.
56. The prevailing percentage of I.T. Department of the gross amount of the bill towards income tax will be deducted from the contractor's bill.
57. GST at source will be deducted as per the Government rule in force.
58. **Prevailing rate of cess i.e. @ 1% on estimated cost put to tender as per the Building and Other Constructed Workers (RE&CS) Act. 1996 and Buildings and Other Construction Workers Welfare Cess Act. 1996 (vide resolution No.-12653, dt.15.12.2008 of Labour and Employment Department, Govt. of Odisha) will be deducted from each running bill of the contractor.**
59. It must be clearly understood that under no circumstances any interest is chargeable for the dues or additional dues if any payable for the work executed and final bill pending disposal due to any reason whatsoever.
60. No extra payment will be made for removing spreading and consolidating salvaged metals and materials.
61. Under section 12 of contractors labour (Regulation and Abolition) Act. 1970 the contractor who undertakes execution of work through labour should produce valid license from licensing authorities of labour Department.

62. Performance Security / Additional Performance Security :

- 62.1 Amendment of Codal & Contractual Provisions of threshold negative bid caps (14.99%) introduced in Appendix-IX, Clause 36 of OPWD Code Volume-II is to be applicable as per the Works Department Office Memorandum No.173 dtd.03.01.2026 & O.M. No.632 dtd.09.01.2026 (Decimals up to two numbers will be taken for all practical purpose) either at the estimated cost put to tender or less than the estimated cost put to tender, tender accepting authority will finalize the tender through a transparent lottery system where all bidders / their authorized representatives, the concerned Superintending Engineer/Executive Engineer and DAO will remain present.

(Amendment to Appendix-IX, Clause-36 of OPWD Code Vol.-II)

(by inclusion vide O.M.No.173 dt.03.01.2026 & O.M. No.632 dtd.09.01.2026).

- 62.2 If the rate quoted by the SC and ST Category Contractors comes to the rate quoted by the L1 bidder (decimal up to two numbers will be taken for all practical purposes) after availing 10% price preference as per Para 2 of Works Department Resolution No.27748 dated.11.10.1977, the tender shall be finalized by the tender accepting authority through a transparent lottery system along with other categories of contractors.
- 62.3 Additional Performance Security shall be obtained from the bidder, when the bid amount is less than the estimated cost put to tender. In such an event, only the successful bidder who has quoted less bid price / rates than the estimated cost put to tender shall have to furnish the exact amount of differential cost i.e. estimated cost put to tender minus the quoted amount as **Additional Performance Security (APS)** in shape of **Term Deposit Receipt** pledged in favour of Divisional Officer/ Bank Guarantee in favour of the Divisional officer. Superintending Engineer, **Cuttack (R&B) Division No.-II, Cuttack** from any Nationalized / Scheduled Bank in India counter guaranteed by its local branch at Bhubaneswar within seven days of issue of letter of acceptance (LOA) by the Divisional officer (by e-mail) to the successful bidder, otherwise the bid of the successful bidder shall be cancelled and the earnest money Deposit / Bid security shall be forfeited. Further proceeding for blacklisting shall be initiated against bidder (As amended vide O.M. No.14459 dt.20.09.2018 of Works Deptt. Govt. of Odisha **has been modified with O.M. No.173 Dt.03.01.2026 & O.M. No.632 dtd.09.01.2026 of Works Dept., Govt. of Odisha**).

If the Contractor fails to complete the work, the amount so furnished as additional performance security will be forfeited in addition to the other penal clauses, if any to be imposed.

(Amendment to Para-3.5.5 (V) Note-II of OPWD Code Vol.-I by substitution of O.M. No.14299 dt.03.10.2017 in place of O.M. No.5288 dt.04.05.2016 **has been modified with O.M. No.173 Dt.03.01.2026 & O.M. No.632 dtd.09.01.2026 of Works Dept., Govt. of Odisha**).

Modified O.M. No.173 Dt.03.01.2026 & O.M. No.632 dtd.09.01.2026 :

Amended vide O.M. No.173 Dt.03.01.2026 & O.M. No.632 dtd.09.01.2026 of Works Dept., Govt. of Odisha to fix the following rate of Additional Performance Security (APS).

Sl. No.	Range of difference between the estimated cost put Tender & Bid Amount	Additional performance security to deposited by the successful bidder.
1.	Below 0.0 % but not below 10.00%	No. Additional Performance Security is required
2.	Below 10.00% and not below 20.00%	The Additional Performance Guarantee/ Security percentage shall be incremented by 0.1% for every percentage of bid price below 10% of the project cost put to bid starting at 11% with the additional bid performance guarantee being 0.1% and this additional performance guarantee percentage shall be applied on the bid price:
3.	Below 20%	The additional performance guarantee percentage shall be incremented by 0.2% for every percentage of bid price below 20% of the project cost put to bid in addition to 1% of the bid price and this additional performance guarantee percentage shall be applied on the bid price.

Note:- The Additional Performance Guarantee/ Security shall be treated as part of the performance security.

63. **Sample of all material** - The contractor shall supply sample of all materials fully before procurement for the work for testing and acceptance as may be requiring by the concerned Superintending Engineer/Executive Engineer.
64. Super class contractor shall employ under himself two Graduate Engineer and two Diploma holders belonging to the State of Odisha. Special class contractor shall employ under him one graduate Engineer and two Diploma Holders belonging to the state of Odisha. Likewise 'A' class contractor shall employ under him one Graduate Engineer or two Diploma Holders belonging to state of Odisha. The contractor shall pay to the Engineering personnel monthly emoluments, which shall not be less than the emoluments of the personnel of equivalent qualification employed under the State Govt. of Odisha. The Engineer-in Chief (Civil), Odisha may however assist the contractor with names of such unemployed Graduate engineers and Diploma Holders if such help is sought for by the contractor. The names of such Engineering personnel appointed by the Contractors should be intimated to the tender receiving authority along with the tender as to who would be supervising the work. Each bill of the Super Class, Special Class or 'A' Class Contractor shall be accompanied by an employment Roll of the Engineering personnel together with a Certificate of the Graduate Engineer or Diploma Holder so employed by the contractor to the effect that the work executed as per the bill has been supervised by him. (Vide Works Department No. Codes M-22/91-15384 dated 9.7.91). The required certificate is to be furnished in the tender documents vide **Schedule-G**.
65. An engineering personnel of the executing agency should be present at work site at the time of visit of High level Inspecting officers in the rank of Chief Engineer and above.
66. All reinforced cement work should conform to Odisha Detailed specification and should be of proportion as per Contract Agreement having desired compressive strength (in work test) in 15 Cm cubes at 28days, after mixing and test conducted in accordance with IS 456 and IS 516.
67. Bailing out of water from the foundation, pipeline trenches S. Tanks/ Soak pits/ Sumps/ M.H. etc. either rainwater or sub-soil water if necessary should be borne by the contractor. No payment will be made for benchmarks. Level pillars, profiles and benching and leveling the ground wherever required. The rates quoted should be for finished items of works inclusive of these incidental items of work. It should be understood clearly that no claims whatsoever would be entertained.
68. The tenderer shall have to abide by the C.P.W.D. safety code rules introduced by the Government of India, Ministry of work Housing and Supply in their standing order No-44150 dtd.25.11.57.
69. The Contractor will have to submit to the **Superintending Engineer, Cuttack (R&B) Division No.-II, Cuttack** monthly return of labour both skilled and unskilled employed by him on the work.
70. All fittings for doors and windows P.H. & Electrical works as supplied by the Contractor should be of best quality and conform to relevant I.S. specification and should be got approved by the Engineer-in-charge of the respective wing before they are used on the work.
71. After completion of the work the contractor shall arrange at his own cost all requisite equipments for testing buildings, if found necessary and bear the entire cost of such test, including the inspection of Electrical Inspectorate.
72. The Tenderer should furnish along with their tender **1.** A list of works, which are at present in their hand (**Schedule-B**) **2.** List of T&P (**Schedule-C**) and **3.** List of work executed (**Schedule-D**) in the prescribed proforma(s) enclosed herewith in appropriate place of bid document.
73. All reinforced cement concrete works should be finished smooth.
74. The tenderer may at his option quote reasonable rate for each item of work carefully so that the rate for one item should not be unworkable low and for others too high.
75. The contractor has to arrange the samples of materials required for execution to be got tested and approved by the Department before taking up the work and during course of execution required from time to time. All such samples will be tested at any of the **Departmental Control and Research Laboratories**, at the cost of the Contractor with no extra cost to the Department.

76. If there is any damage to the work due to natural calamities like flood or cyclone or any other cause during the course of execution of work or up to 6 months after completion of work or if any, imperfection becomes apparent to the work within 6 months from the date of final certificate of completion of work the contractor shall make good of all such damages at his own cost with no extra cost to the Department. No claims, whatsoever, in this regard will be entertained.
77. The Fly Ash Bricks should be of good qualities. The bricks should be approved by the Engineer-in-Charge before use in the work and should confirm to the minimum strength and other criteria as per National Building Code.
78. Under Section 1 of contract labour Regulation and Abolition Act 1970 the contractor who undertakes execution of work through labour should produce valid license from the licensing authority of labour Department.
79. Standard co-efficient for linear measurement will be adopted while calculating consumption of steel and no claim whatsoever regarding difference in co-efficient of steel will be entertained. The rates quoted shall be inclusive of any eventuality of difference for co-efficient for linear measurements.
80. Engineer Contractor desirous to avail the facility of exemption of E.M.D is required to submit an affidavit to the effect that he has not yet availed the facility / participated in the tender for more than two works (Excluding this work) during the current financial year. The name of work for which participated and the authority to whom the tender was submitted must be mentioned in the affidavit, failing which the tender will be rejected.
81. That for the purpose of jurisdiction in the event of disputes if any of the contract would be deemed to have been entered in to within the State of Odisha and it is agreed that neither party to the contract will be competent to bring a suit in regard to the matter by this contract at any place outside the State of Odisha.
82. **SPECIAL CONDITIONS (PART OF THE CONTRACT)**
 - (I) All materials before they are being used in the items of works as per this Schedule of quantities and also the finished items of work where tests are applicable shall have to be tested through the Engineer-in-charge of the respective wing at appropriate Laboratories according to the relevant I.S. specifications of the materials and the said items of works and the cost of all such tests shall have to be borne by the Contractor and the rates of the items of works should be inclusive of cost of such tests.
 - (II) The tests have to be planned & carried out such that the progress of work is not hampered
 - (III) The tests are mandatory as per the prescribed frequencies and I.S. specifications. However, these are not exhaustive and the Engineer-in-charge has the right to prescribe other required test if any as will be considered from time to time.
83. In case of ambiguity between clauses of this D.T.C.N. and the **P-1** contract form, the relevant Clauses of the **P-1** contract form shall prevail over the D.T.C.N. The clauses not covered under **P-1** contract form shall be governed by the clauses of the D.T.C.N.
84. It must be definitely understood that the Government does not accept any responsibility for the correctness and completeness of the trial borings shown in the Cross Section.
85. Schedule of quantities is accompanied in **Cover-II (Price Bid)**. It shall be definitely understood that the Government does not accept any responsibility for the correctness or completeness of this schedule and that this schedule is liable for alternation or omissions, deductions or alternations set forth in the conditions of the contract and such omissions, deductions, additions or alternations shall no way invalidate the contract and no extra monetary compensation, will be entertained.
86. In case of any complaint by the labour working about the non-payment or less payment of his wages as per latest minimum Wages Act, the Superintending Engineer/Executive Engineer will have the right to investigate and if the contractor is found to be in default, he may recover such amount due from the contractor and pay such amount to the labour directly under intimation to the local labour office of the Govt. The contractor shall not employ child labour. The decision of the Superintending Engineer/Executive Engineer is final and binding on the contractor.

87. The contractor should arrange the materials like Steel, Cement, paint and bitumen etc. of approved quality and specification at his own cost for completion of the work with the time schedule. No extension of time will be granted on the application of the contractor due to delay in procurement of materials.
88. The bidder will be responsible for the loss or damage of any departmental materials during transit and in the execution of the work due to reasons what-so-ever and the cost of such materials will be recovered from the bills at stock issue rates or market rates whichever is higher.
89. If the contractor removes Government materials supplied to him from the site of work with a view to dispose of the same dishonestly, he shall be in addition to any other liability civil or criminal arising out of his contract be liable to pay a penalty equivalent to five times of the price of the materials according to the stock issue rate or market rate whichever is higher. The penalty so imposed shall be recovered at any time from any sum that may then or at any time thereafter become due to the contractor or from his security deposit or from the proceeds of sale thereof.
90. The selected contractor may take delivery of departmental supply according to his need for the work issued by the **Sub-Divisional Officer in-charge** subject to the availability of the materials. The tenderer shall make all arrangement for proper storages of materials but no cost for raising shed for storage, pay of security guard etc. will be borne by the Department. The Department is not responsible for considering the theft of materials at site. It is the contractor's risk. Under any such plea if the tenderer stops the work, he shall have to pay the full penalty as per clause of **P1** agreement.
91. The Department will have the right to supply at any time in the interest of work any departmental materials to be used in the work and the contractor shall use such materials without any controversy or dispute on that account. The rate of issue of such materials will be at the stock issue rates inclusive of storage charges or rates fixed by the Department or current market rate whichever is higher.
92. All the materials which are to be supplied from P.W.D. store will be as per availability of stock and the contractor will have to bear the charges of straightening, cutting, jointing, welding etc. to required sizes in case of M.S. Rods or TOR Steel / M.S Angles, Tees and Joists etc. After the issue from the P.W.D. store, the materials may be under the custody of the contractor and the contractor will be responsible for its safety and storage. Cut pieces of steel more than one meter in length will be returned by the contractor at the issuing stores without conveyance charges.
93. Though Departmental issue of cement and steel has indicated, it may not be taken as binding. The contractor must have to arrange by themselves cement, steel, bitumen and every sort of materials from approved manufacturer, get it tested in the Departmental Laboratory and approved by the Department before use. No extension of time or escalation of price on such account shall be entertained in future.
94. TOR rods, plates and structural members will be supplied in quantity, length and size available in the stock. For payment of reinforcement, the steel including plates etc. shall be measured in length of different diameter, size and specification as actually used (including hooks and cranks) in the work correct to an inch or cm. And their weight calculated as per sectional weight prescribed by the Indian Standard Specification or as directed by the Engineer-in-Charge (Wastage of bars and unnecessary lapping will not be considered for measurement and payment).
95. **Odisha Bridge & Construction Corporation Ltd.** will be allowed price preference up to 3% over the lowest quotation or tender as laid down in Works and Transport Department Resolution No-285 date-17.04.1974. The **Odisha Construction Corporation** will be allowed a price preference to the extent of up to 3% over the lowest tender amount (Where their tender is not the lowest) provided they express willingness to execute the work after reduction of rates by negotiation.
96. The contractor is required to pay royalty to Govt. as fixed from time of time and produce such documents in support of their payment to the concerned Superintending Engineer/Executive Engineer with their bills, falling which the amount towards royalties of different materials as utilized by them in the work will be recovered from their bills and deposited in the revenue of concerned department.

97. **Trial Boring** - The foundation level as indicated in the body of the departmental drawing is purely tentative and for the general guidance only. The Department has no responsibility for the suitability of actual strata at the foundation level. The contractor has to conduct his own boring before starting the work and get the samples tested at his own cost to ascertain the S.B.C. and credibility of the strata at founding level while quoting his rates for tender the contractor shall take in to account of the above aspects.
98. Any defects, shrinkage or other faults which may be noticed within **12 (Twelve) months** from the completion of the work arising out of defective or improper materials or workmanship timing are upon the direction of the Engineer-in-Charge to be amended and made good by the contractor at his own cost unless the Engineer for reasons to be recorded in writing shall be decided that they ought to be paid for and in case of default Department may recover from the contractor the cost of making good the works. The contractor is also required to maintain the road/ building for **12 (Twelve) months** from the date of successful completion of the work.
99. From the commencement of the works to the completion of the same, they are to be under the contractors charge. The contractor is to be held responsible to make good all injuries, damages and repairs occasioned or rendered necessary to the same by fire or other causes and they hold the Govt. of Odisha harmless for any claims for injuries to person or structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or any one in his employment during the execution of the work. Also no claim shall be entertained for loss due to earthquake, flood, cyclone, epidemic, riot or any other calamity whether natural or incidental damages so caused will have to be made good by the contractor at his own cost.
100. **Gradation of ingredients:** The coarse and fine aggregate shall meet the grade requirement as per the latest provision of relevant. I.S. Code / I.R.C. code / MoRT&H specifications.
101. Where it will be found necessary by the Department, the Officer-in-Charge of the work shall issue an order book to the contractor to be kept at the site of the work with pages serially numbered. Orders regarding the work whenever necessary are to be entered in this book by the P.W.D. Officer-in-Charge with their dated signatures and duly noted by the contractor or his authorized agents with their dated signature. Orders entered in this book and noted by the contractor's agent shall be considered to have been duly given to the contractor for following the instructions of the Department. The order Book shall be the property of the P.W.D. and shall not be removed from the site of work without written permission of the Engineer (Superintending Engineer/Executive Engineer) and to be submitted to the Engineer-in charge every month.
102. The contractor should attach the certificate in token of payment deposit with the registration authority as per recent circular of the Government relating to his registration.
103. In case of any discrepancy in printing or omissions of statutory specifications or any other part or portion of the approved document during download of the bid document, the decision of the officer inviting the bid will be binding on the bidder.
104. The rates quoted by the contractor shall cover the latest approved rates of Labours, Materials, P.O.L. and Royalties. Arrangement of borrow areas i.e. Land, Approach Road to the building site etc. are the responsibility of the contractor.
105. The rate for each work of concrete items wherever dewatering is imperatively necessary the term dewatering shall mean the execution or operation of the items due to standing water as well as due to percolation of water. The quoted rates will be inclusive of this.
106. The contractor shall make requisition of claim book from the date of commencement of the work from the Department and shall maintain in proper P.W.D. form with pages serially numbered in order to record items of works are not covered by his contract and claimable as extra. Claims shall be entered regularly in this book under the dated signature of the contractor or his duly authorized agents at the end of each month. A certificate should be furnished along with the claim to the effect that he has no other claim beyond this claim up-to-date. If in any month there are no claims to record, a certificate to that effect should be furnished by the contractor in the claim book. Each claim must be defined and should be given as far as possible regarding the quantities as well as the total amount claimed. The claim book must be submitted by the contractor regularly by 10th and 16th days of each month for orders of the Engineer-in-Charge or competent authority. Claims not made in this manner or the claim book not maintained from the commencement of the work is liable to be summarily rejected. The claim book is the property of the P.W.D. and shall be surrendered by the contractor to the Engineer-in-charge after completion of the work or before recession of the contract by the Department whichever is earlier for record.

107. Number of tests as specified in I.R.C. / MoRT&H / I.S.I specification required for the construction of roads / bridges / buildings or any other structural works will be conducted in any Govt. Test House /Departmental laboratories/reputed material testing laboratory as to be decided by the Engineer-in-charge. Testing charges including expenditure for collection / transportation of samples /specimens etc. will be borne by the contractor. The collection of samples and testing are to be conducted for both prior to execution and during execution as may be directed by the Engineer-in-charge and on both the accounts the cost shall be borne by the contractor.
108. Even qualified criteria are met, the bidders can be disqualified for the following reasons, if enquired by the Department
- (a) Making a false statement or declaration.
 - (b) Past record of poor performance.
 - (c) Past record of abandoning the work half way/ recession of contract.
 - (d) Past record of in-ordinate delay in completion of the work.
 - (e) Past history of litigation.
109. In case the 1st lowest tenderer or even the next lowest tenderers withdraw in series one by one, thereby facilitating a particular tender for award, then they shall be penalized with adequate disincentives with forfeiture of EMD unless adequate justification for such back out is furnished. Appropriate action for black listing the tenderers shall also be taken apart from disincentives against the tenderer.
110. The following documents which are not submitted with the Bid, will be deemed to be part of the Bid:

Sl. No	Particulars
1	Notice Inviting tender
2	Instruction to the Bidders
3	Conditions of Contract.
4	Contract data
5	Specifications
6	Drawings

111. **Condition for issue of plant & machinery to contractor on hire:** - Tools & plants will be issued to the contractor only if it is desirable in the interest of Govt. works and if these can be spared without inconvenience to the Department. The Sanction of the Chief Engineer, Buildings-I, Odisha shall be necessary in each case. The contractor shall arrange his programme of work according to the availability of the plant & machinery & no claim will be entertained for any delay in supply by the Department.

An agreement shall be entered in to by the contractor to the effect that these hire charges are recoverable from the bills of the contractor regularly and the final payment for the work including refund of security deposit will not be made until the total amount due to the Government on account of hire of machinery etc. is recoverable in full. Full amount of hire charges due from the contractor at any contract at any time shall be recovered from his next subsequent bill. All transit and incidental charges in connection with the despatch of tools and plants and machineries from workshop shed/ deposit return there to, will be borne by the contractor. The hire charge shall be recovered at the prescribed rates from and inclusive of the date, the plant and machinery is made over up to and inclusive of the date of its return, even though the same day it may not have been utilised for any reason except for a major break down which may take more than 72 hours for repairs. The contractor shall immediately intimate in writing to the Engineer-in-charge when any plant or machinery goes out of order requiring major repairs. The hire charges are for clock hours. In case of tar boilers, hot mix plant and any other machinery requiring similar preparation the working hour will include the time required to make up the boiler temperature and bring plant to the operating conditions before the actual start of work. The machine will work in shifts of 8 hours each. Extra charges towards overtime wages of any of the operating and maintenance staff will be leviable. These charges will be fixed by the Engineer-in-charge from time of time. In no case, the tools and plants shall be operated beyond 8 hours in any shift without prior written permission of the Engineer-in-charge.

The contractor shall release the plant and machinery as and when required for periodical servicing and maintenance. He shall also provide for any labour and water source for washing the plants. In the case of Concrete mixtures, pavers and similar such type of equipments, the contractor shall arrange to get the hopper cleaned and the drums etc. washed at the close of work each day. The plant and machinery once issued to a contractor shall not be returned by him on account of lack of arrangement of labour and material etc. on his part. The same will be returned only when they do not require or when in the option of Engineer-in-charge the work or a portion of work for which issued is completed.

The tools and plants shall while in transit and in the custody of contractor be at his sole risk and responsibility for damages and / or loss except fair wear and tear. The damage or loss as assessed by Engineer-in-charge shall be made good by the contractor. In the event of a disagreement as to the extent of damage or the value of article lost, the decision of Chief Engineer, Buildings-I, Odisha shall be final. The contractor shall on or before the supply of plant and machinery sign an agreement in indemnifying the Govt. against loss or damage to the machine. The Contractor shall also be responsible for any claim for compensation for loss of life, injury or damages to property etc. arising from any cause what-so-ever. The contractor shall provide full time choudidar for guarding the plant and machinery at site.

If the articles are not returned within the date originally specified or extended by the Engineer in Charge, in addition to the normal hire charge, a surcharge equal to 10% of the hire charges will be levied for the period that the machinery is not returned. Such period will be treated as working time. In the event of the non-return of the machinery, the full value of the articles at the current market price will be recovered from the contractor's outstanding bills or any bills that may become due in respect of his other work under the state public works Department. The decision of the Chief Engineer, Buildings-I, Odisha shall be final in case of dispute.

FORM OF AGREEMENT – The contractor shall, before taking the possession of the machinery, enter in to an agreement with the Engineer-in-charge or his nominees in the form attached. Log Books for recording the hours of daily works for each of the plant and machinery supplied to the contractor will be maintained by the Department will be attested by the contractor or his authorized agent daily. In case of contractor contests the correctness of the entries and / or fails to sign the logbook, the decision of the Engineer-in-charge shall be final and binding on him. Hire charges will be calculated according to the entries in the logbook and will be binding on the contractor.

AGREEMENT FOR LOANS OF GOVERNMENT TOOLS & PLANTS

This agreement made on the Two Thousand between (herein-after referred to as “**the hirer**” which expression shall unless excluded by or repugnant to the context include his heirs, executors, administrators and assigns) of the one part and the Govt. of Odisha (here in after referred to as the Governor which expression shall unless excluded by or repugnant to the context include his successors in office as assigns) of the other part. Whereas the hirer desirous of hiring the tools and plants of the P.W. Department of the Odisha Govt. and more particularly specified in the schedule here under between here in after referred to as “the tools and plants”. And whereas Government has agreed to let in hire the tools and plants to the hirer on the terms and conditions here in after mentioned. Now it is here by and between the parties here to as follows :-

- a) In consideration of agreement that hire charges be recovered from their bill for work executed on which this machinery will be used or any other than standing in the names of contractors in the book of the Department or any other Government Department. The Govt. agrees to let the hirer tools and plants for the period to be computed from the date of delivery of the tools and plant to the hirer at the P.W. Department workshop / store at **Cuttack**.
- b) The rate of higher charges will be as mentioned in the schedule attached.
- c) The hirer shall not transfer, assign or sublet or in any way part with the tools and plants or any part there-of without the previous written approval of the Engineer-in-charge
- d) On the expiry of the period of the hire, the hirer shall return the tools and plants to the Public Works Department. & Workshop / store at **Cuttack** in the same good condition in which they were received by him.

- e) In the event of the tools and plants not being returned on the expiry of the above-mentioned period, the hirer shall without prejudice and any other liability pay to the Government on account equivalent to the rate of hire specified for the working period and an increase of ten percent.
- f) The tools and plants shall be open for inspection at all times to the officers of the Government.
- g) The hirer shall not operate the tools and plants so hired for more than one shift / two shifts of 8 hours each per day without the prior sanction of the Engineer-in-charge. If the hirer operates the tools and plants beyond the aforesaid limit without the prior sanction of the Assistant Engineer, he shall pay to Government additional hire charges as well as over time charges for staff for such excess operation at the rate approved by the Engineer-in-charge from time to time.
- h) In case of breakdown, repairable at the site within a period of three days hire charges as specified in the schedule will be levied except in case of major repairs.
- i) Normally the tools and plants will be supplied with operating staff.
- j) The hirer shall be responsible for any claims for compensation for loss of life, injury or damage to property etc. arising due to any causes what-so-ever during the period of the machinery is in his charge.
- k) All municipal or other dues and taxes payable on account of the use or operation of the tools and plants for the period of hire shall be defrayed by the hirer.
- l) The hirer shall make good any loss or damages arising out of causes other than fair wear and tear to the tools and plants during the period of hire. The cost recoverable from the hirer shall be the full replacement value as determined by the Engineer-in-charge. In the event of any loss or damage not being made good by the hirer to the satisfaction of the said Engineer-in-charge the office shall be at liberty to make good himself such loss or damage and recover the cost thereof from the hirer. The hirer shall pay to the Engineer-in-charge such an amount as shall be necessary to make good the loss or damage failing which the same will be recovered from his dues as in case of hire charges.
- m) On the breach of any terms or conditions of this agreement by the hirer the Engineer-in-charge shall be entitled to demand the return of tools and plants and the hirer shall return the tools and plants within 72 hours from the date of receipt of such order in writing .In case of failure on the part of the hirer to comply with such order he shall be liable to pay such penalty as may be imposed by the Engineer-in-charge for the period the tools and plant are detained provided that the maximum penalty shall not exceed the cost replacement of the tools and plants .
- n) In case of any disputes between the hirer and the Government, the decision of the Chief Engineer, Buildings-I, Odisha shall be final.
- o) This agreement shall be operated by the Engineer-in-charge on behalf of the Government and the term Engineer-in-charge shall include all officers duly authorised by him to exercise powers on his behalf.

THE SCHEDULE

Serial No.	Description and Name of the articles	No.	Amount of hire per hour	Remarks

In witness where of the hirer and the Engineer-in-Charge has for and on behalf of the Governor of the State has set their respective hand, the day and the year here in above written.

Signed by:

- 1.
- 2.

Signed sealed and delivered in the presence of

112. **ELIGIBILITY CRITERIA:**

To be eligible for qualification, applicants shall furnish the followings. Non-furnishing of the following particulars shall be treated as ineligible.

- a. Required E.M.D(Bid Security) as per the Clause No.20 of DTCN
- b. Cost of bid document towards Cost of tender paper as per Clause No.4 of DTCN.
- c. Scanned copy of valid Contractor Registration Certificate, GST Registration Certificate, GSTIN, PAN card along with the tender documents and the L-I bidder has to furnish the Original Registration certificate, GSTIN and Pan card for verification within (5) Five days of opening of Cover-II of the tender before Chief Engineer, Buildings-I, Odisha, Bhubaneswar as per Clause No-1, 5(i) and 21 of DTCN. The contractor belonging to outside state of Odisha and not started business should submit an undertaking in the form of an Affidavit indicating therein that they are not registered under Odisha GST as they have not started any business in the state and they have no liability under the Act. But before award of final contract, such bidders will have to produce the GST Registration certificate.
- d. License criteria as per Clause No.8 of DTCN need to be furnished. M.O.U. to be furnished in the format as mentioned at Schedule-J where ever applicable.
- e. Evidence of ownerships of machineries/ equipments as per Clause No.7 of DTCN and need to be furnished by the bidder in Schedule-C.

f. **Joint Ventures are not accepted.**

- g. The bidder should have satisfactorily completed the works during the last five years ending previous day of last date of submission of tenders.

1. Three similar works each costing not less than 40% of the estimated cost (Excluding GST) of the project.

OR

2. Two similar works each costing not less than 50% of the estimated cost (Excluding GST) of the project.

OR

3. One similar work costing not less than 80% of the estimated cost (Excluding GST) of the project.

Similar work shall mean construction of a RCC frame Structure multistoried composite building executed under one agreement for any authority bodies of State Govt. / Central Govt./ Reputed Private Organization or Companies with Certificate from the concerned officer not below the rank of Superintending Engineer/ Executive Engineer or Equivalent need to be furnished by the bidder as per Scheduled-D. In case of execution of work in Private Organization / Companies the Certificate from the concerned competent authority supported with Income Tax return against the payment received for the same is required to be furnished by the bidder in Schedule-D. The Current price level for similar nature of work will be taken into consideration as per escalation factor mentioned in DTCN at clause 112 (h).

- h. **BID CAPACITY** - (Vide Works Department Office Memorandum No.6300 dtd.16.6.2011)

Applicants who meet the minimum qualification criteria will be qualified only if their available bid capacity at the expected time of bidding is more than the total estimated cost of the works. The available bid capacity will be calculated as under.

Assessed Available Bid Capacity = $(A \times N \times 2 - B)$, where

A = Maximum value of works executed in any one year during the last five years (updated to the current price level) rate of inflation may be taken as 10% per year (escalation factor) which will taken into account the completed as well as works in progress.

B = Value of **current price level** of the existing commitments and ongoing works to be completed during the next years (period of completion of works for which Bids are invited).

N = Number of years prescribed for completion of the work for which the Bids are invited.

(For work completion period less than one year the value may be taken as one year)

Note : In case of a Joint Venture the available Bid capacity will be applied for each partner to the extend of his proposed participation in the execution of the works.

The Statement showing the value of existing commitments and ongoing works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Engineer-in-Charge not below the rank of an Superintending Engineer/Executive Engineer.

Escalation Factor : For calculation of 'B' the following enhancement factors will be used for the cost of works executed and the financial figures to a common base value for works completed in India.

<u>Year before</u>	<u>Multiplying factor</u>
One	1.10
Two	1.21
Three	1.33
Four	1.46
Five	1.61

(Applicant should indicate actual figures of costs and amounts for the works executed by them without accounting for the above mentioned factors)

In case the financial figures and value of completed works are in foreign currency the above enhanced multiplying factors will be applied. Instead, current market exchange rate(State Bank of India BC selling rate as on the last date of submission of the bid) will be applied for the purpose of conversion of amount in foreign currency into Indian rupees.

The information on Bid Capacity as on the date of this bid is to be furnished as per the format in **Schedule-B.**

Total value of Civil Engineering construction work performed in the **last five years** are to be furnished for which **certificate from Chartered Accountant is to be furnished.**

2021-2022 -----	2023-2024 -----	2025-2026 -----
2022-2023 -----	2024-2025 -----	

I. Non submission of required information in schedule B, D, E and F shall be treated as non-responsive and the bid shall be summarily rejected. The documents uploaded for one bid or part thereof shall not be considered during evaluation of other bid and each bid shall be evaluated as per the documents uploaded for the particular bid.

113. Time Control :- (Vide Works Department Office Memorandum No.24716 dtd.24.12.2005 and No.8310 dtd.17.05.2006)

- a) Progress of work and Re-scheduling programme.
 - i) The Superintending Engineer/Executive Engineer / Engineer-in-Charge shall issue the letter of acceptance to the successful contractor. The issue of the letter of acceptance shall be treated as closure of the Bid process and commencement of the contract.
 - ii) Within 15 days of issue of the letter of acceptance, the contractor shall submit to the Engineer-in- Charge for approval a Programme showing the general methods, arrangements, and timing for all the activities in the Works along with monthly cash flow forecast.
 - iii) To ensure good progress during the execution of the work the contractors shall be bound in all cases in which the time allowed for any work exceeds one month to complete, 1/4th of the whole time allowed under the contract has elapsed, ½ of the whole of the work before ½ of the whole time allowed under the contract has elapsed, 3/4th of the whole of the work before 3/4th of the whole time allowed under the contract has elapsed.
 - iv) If at any time it should appear to the Engineer-in-Charge that the actual process of the work does not conform to the programme to which consent has been given the Contractor shall produce, at the request of the Engineer-in-Charge, a revised programme showing the modifications to such programme necessary to ensure completion of the works within the time for completion. If the contractor does not submit an updated Programme within this period, the Engineer-in-Charge may withhold the amount of 1% of the contract value from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.
 - v) An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.
 - vi) The Engineer-in-Charge's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Engineer-in-Charge again at any time. A revised Programme is to show the effect of Variations and Compensation Events.

b) Extension of the Completion Date.

- i) The time allowed for execution of the works as specified in the Contract data shall be the essence of the Contract. The execution of the works shall commence from the 15th day or such time period as mentioned in letter of Award after the date on which the Engineer-in-

Charge issues written orders to commence the work or from the date of handing over of the site whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, Government shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money & performance guarantee / Security deposit absolutely.

- ii) The Contractor shall submit the Time & Progress Chart for each milestone Quarter wise indicating each month and get it approved by the Department. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in- Charge and the Contractor within the limitations of time imposed in the contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per milestone given in contract data.
 - iii) In case of delay occurred due to any of the reasons mentioned below, the Contractor shall immediately give notice thereof in writing to the Engineer-in-Charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.
 - (1) Force majeure, or
 - (2) Abnormally bad weather, or
 - (3) Serious loss or damage by fire, or
 - (4) Civil commotion, local commotion of workmen, strike or lockout affecting any of the trades employed on the work, or.
 - (5) Delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract.
 - (6) In case a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost, or
 - (7) Any other cause, which, in the absolute discretion of the authority mentioned, in Contract data is beyond the Contractors control.
 - iv) Request for reschedule and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen (14) days of the happening of the event causing delay. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.
 - v) In any such case a fair and reasonable extension of time for completion of work may be given. Such extension shall be communicated to the Contractor by the Engineer-in-Charge in writing, within 3 months of the date of receipt of such request. Non-application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-in-Charge and this shall be binding on the contractor.
- c) **Compensation for Delay.**
- If the contractor fails to maintain the required progress in terms of clause-2 of P-1 Contract or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the **Superintending Engineer (whose decision in writing shall be final and binding)** may decide on the amount of tendered value of the work for every completed day / month (as applicable) that the progress remains below that specified in Clause-2 of P-1 Contract or that the work remains incomplete. This will also apply to items or group of items for which a separate period of completion has been specified. Compensation @ 1.5% per month of for delay of work, delay to be completed on per Day basis. Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% of the Tendered Value of work or to the Tendered Value of the item or group of items of work for which a separate period of completion is originally given. The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the Government. In case, the contractor does not achieve a particular milestone mentioned in contract data, or the

rescheduled milestone(s) in terms of Clause-2.5, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of extension of time. Withholding of this amount on failure to achieve a milestone shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However no interest whatsoever shall be payable on such withheld amount.

d) Bonus for early completion

For availing incentive clause in any project which is completed before the stipulated date of completion, subject to other stipulations it is mandatory on the part of the concerned Superintending Engineer/Executive Engineer to report the actual date of completion of the project as soon as possible through fax or e-mail so that the report is received within 7 days of such completion by the concerned Superintending Engineer, Chief Engineer & the Administrative Department. The incentive for timely, completion should be on a graduated scale of one percent to 05 percent of the contract value. Assessment of incentives may be worked out for earlier completion of work in all respect in the following scale.

Before 30 % of contract period = 5 % of Contract Value

Before 20 to 30 % of contract period = 4 % of Contract Value

Before 10 to 20 % of contract period = 3 % of Contract Value

Before 5 to 10 % of contract period = 2 % of Contract Value

Before 5% of contract period = 1 % of Contract Value

(Amendment to Para-3.5.5 (V) of Note-III of OPWD Code Vol.-I by inclusion vide O.M. No.5288 dt.04.05.2016)

e) Management Meetings

- i) Either the Engineer or the Contractor may require the other to attend a management meeting. The business of management meetings shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- ii) The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

Rescission of Contract (Amendment as per letter No.10639 dt.27.05.2005 of Works Department, Odisha):-To rescind the contract (of which rescission notice in writing to the contractor under the hand of the Superintending Engineer/Executive Engineer shall be conclusive evidence), 20% of the value of left over work will be realized from the contractor as penalty.

114. Building and other Construction Workers Welfare Cess @ 1% of the estimated cost as per tender notification read with latest corrigendum if any will be proportionately deducted from the contractor's bill at the time of making payment of each bill.
115. The tenderers are required to go through each clause of P.W.D. Form **P-1** carefully in addition to the clauses mentioned here in before tendering.
116. A Contractor may be black listed as per amendment made to Appendix XXXIV to OPWD Code Vol.- II on rules for black listing of Contractors vide letter no.3365 dt.01.03.2007 of Works Department, Odisha.
As per said amendment a Contractor may be blacklisted
 - a) Misbehavior/threatening of Departmental & supervisory officers during execution of work/tendering process.
 - b) Involvement in any sort of tender fixing.
 - c) Constant non-achievement of milestones on insufficient and imaginary grounds and non-adherence to quality specifications despite being pointed out.
 - d) Persistent and intentional violation of important conditions of contract.
 - e) Security consideration of the State i.e. any action that jeopardizes the security of the State.
 - f) Submission of false/ fabricated / forged documents for consideration of a tender.
117. The safety certificate of the E.I. work will be furnished by the agencies after getting necessary verification from the electrical inspector / equally competent authority responsible for the work prior to Energisation of the building.

- 118.** Percentage rate contract (vide Works Department letter no.8310 dt.17.05.2006) In case of percentage rate tender:-
- i) The Contractor has to mention percentage excess or less over the estimated cost (In figures as well as words) in the prescribed format appended to the tender document.
 - ii) Contractors participated in the tender for more than one work may offer conditional rebate. Rebate offer submitted in separate sealed envelope shall be opened, declared and recorded first. The rebate so offered shall be considered after opening of all packages called in the same Tender Notice. The Contractors who wish to tender for two or more works shall submit separate tender for each. Each tender shall have the Bid Identification No., Name & Sl. No. of the work (as per IFB) to which they refer, written on the envelope.
 - iii) Only percentage quoted shall be considered. Percentage quoted by the Contractor should be accurately filled-in figures and words, so that there is no discrepancy.
 - (1) If any discrepancy is found in the percentage quoted in words and figures, then the percentage quoted by the Contractor in words shall be taken as correct
 - (2) If any discrepancy is found in the percentage quoted in percentage excess/ less and the total amount quoted by the Contractor, then percentage will be taken as correct.
 - (3) The percentage quoted in the tender without mentioning excess or less and not supported with the corresponding amount will be treated as excess.
 - (4) The percentage quoted in the tender without mentioning excess / less supported with corresponding amount does not tally with either to percentage excess or less then it will be treated as percentage excess.
 - (5) The percentage quoted in the tender without mentioning excess / less supported with corresponding amount if tallied with the percentage then it will be treated as to which side the amount tallies.
 - (6) The Contractor will write percentage excess/ less up to **two decimal point** only.
 - (7) The tender shall be written legibly and free from erasures, over writings or corrections of figures. Corrections, over writings & interpolations where unavoidable should be made by making out, initialing, dating and rewriting.
 - iv) In the contract P1 time is the essence. The contractor is required to maintain a certain rate of progress specify in the contract.
 - v) The quantity mentioned can be increased or reduced to the extent of 10% for individual items subject to a maximum of 5% over the estimated cost. If it exceeds the limit stated above prior approval of competent authority is mandatory before making any payment.
 - vi) The period of completion is fixed and cannot be altered except in case of exceptional circumstances with due approval of next higher authority.
 - vii) Bills for percentage rate tenders shall be prepared at the estimated rates for individual items only and the percentage excess or less shall be added or subtracted from the gross amount of the bill.

(Total 118 Clauses)

APPROVED

**Sd/-
Chief Engineer, Buildings-I, Odisha,
Bhubaneswar**

TECHNICAL SPECIFICATION OF CIVIL PORTION OF WORK

Materials of following specification are to be used in work. The Tenderers are expected to possess and be well conversant with the following IS standard and code of practice.

1.	Cement	Will be as per I.S. 269/255 (However the grade of cement to be selected by the Engineer-in-Charge of work and compressive cube test before commencement of work in each batch).
2.	Steel	I.S. 432 (Plain) and 1786 (Tor)
3.	Vibrator	I.S. 7246
4.	Aggregate	I.S. 383, I.S. 515
5.	Water for mixing and curing	Shall be clean, free from injurious amount of oil, salt, acid, vegetable materials and other substances and harmful to concrete in conformity to I.S. 456 and I.S. 2025.
6.	Sand/ Fine Aggregate	I.S. 2116, 383
7.	Binding wire	I.S. 280 (galvanized minimum 1 mm)
8.	Rain water pipe	I.S. 2527
9.	Construction joints	I.S. 3414
10.	Steel Window Frame	I.S. 1038/83
11.	Steel Door Frame	I.S. 4351/75
12.	Fitting & Fixtures for joinery works	Conforming to I.S. 7452/82 strictly conform to I.S. specification and as per direction of Engineer-in-Charge.

Note : For road work (Approach Road) specification as per road and bridges (latest edition) published by I.R.C & M.O.S.T. shall be followed. In case of any doubt and absence of provision, regarding specification I.S. shall be referred (Indian standard).

ITEM OF WORK

- Concrete shall be with conformity to I.S.456.
- Foundation shall be with conformity to I.S.1080.
- Stone masonry (R.R.) shall be with conformity to I.S.1597 (Part-I)
- C.R. Masonry shall be with conformity to I.S.1597.
- Brick masonry shall be with conformity to I.S.2212.
- Cement plastering shall be with conformity to I.S.9103 & 6925.
- Mortar shall be with conformity to I.S.2250
- White and colour washing shall be with conformity to I.S.6278.
- CC in foundation shall be with conformity to I.S.2571.
- Anti-Termite Treatment shall be with conformity to I.S.6813. (Part – I & Part – II)
- Painting to all surfaces shall be with conformity to I.S.2395 (Part – I & Part – II)
- DPC shall be with conformity to I.S.3067
- Tarfelt treatment shall be with conformity to I.S.1346
- Mosaic flooring with conformity to I.S.2114
- Steel painting shall be with conformity to I.S.1477 (Part – I & Part – II) I.S.1661

TECHNICAL SPECIFICATIONS OF P.H. PORTION OF WORK

A) WATER SUPPLY & SANITARY INSTALLATIONS:

Materials of following standard manufacturers are to be used in the work. The contractor shall indicate, in the offer, the brand or make of the materials, for which the rates are quoted.

(a) Sanitary fixtures:

To be of best quality vitreous ware of porcelain.

- (i) Indian water closet
- (ii) Foot Rests
- (iii) Wash Hand Basin
- (iv) Kitchen Sink Hindware/Parry Ware / Neycer/ ISI marked
- (v) Urinals
- (vi) Drain Board
- (vii) Odisha Closet
- (viii) European Water Closet &
Low Level Flushing Cistern.

- (b) **C.I. High Level Flushing Cisterns :** Sushila Industries Prabhat Iron Foundry/
East India Steel / I.S.I. marked. “
- (c) **H.C.I. Soil Waste Pipes:** Confirming to I.S.I. 1729-1954, having
I.S.I.Mark.
- (d) **C.P. Bath Room Fittings:** Plaza/Jaquar I.S.I. marked &
confirming to-latest ISS
- (e) **Brass Fittings :** Shakti/Anupama /Luster/1.S.I.Marked.
- (f) **Gunmetal Valves :** Anupama / Leader / B.S.I.S.I. marked.
- (g) **G.I. Pipes (Medium Class):** Manufactured by TATA / JINDAL / B.ST.
having I.S.I. Mark.
- (h) **Galvanised Iron fittings :** I.S.I. marked C/R brand.
- (i) **Paints:** Asian / Berger / Jonson/Confirming to I.S.S
- (j) **Cast Iron Manhole cover frame:** Sushila Industries / Prabhat Iron Foundry /
East India Steel make confirming toISS 7.26
- (k) **Stone Ware Pipes &Fittings :** Manufactured by Odisha Ceramic Industries
/ Odisha industries / Keshab Ceramic
confirming to I.S.S. Specification No.651 /
1980 {Grade A}
- (l) **P.V.C. (S.W.R.) & P.V.C (Rigid.)
Pipe/Fittings:** Manufactured by the Supreme Industries
Ltd., Bombay / Oriplast, BalasoreDuroplast
confirming to I.S. Specification No. 4985/81
(Class IV)

(B) BUILDING MATERIALS:

(a) Bricks:

Bricks shall be of locally available best quality kiln burnt. Bricks shall be well burnt, uniform deep red, cherry or copper colored, free from cracks and flaws, well shaped, uniform in size, homogeneous in textures and shall omit a clear metallic sound when struck, bricks shall have a minimum crushing strength 75 Kg/Cm² and shall not absorb water more than 20% by weight.

(b) Cement Mortar:

Mortar shall be well mixed to a uniform colour and consisting in the proportion as specified in the items of work. Sand shall be measured on the basis of its dry volume and the quantity shall be adjusted for bulking of damp sand. Cement shall be mixed, taking 50 kg. or 0.035 Cum. in volume only required quantity that can be consumed within 30 minutes of adding water shall be mixed at one time.

(c) Cement:

Cement should confirm to IS-269/IS-455.

(d) Sand:

Locally available best river sand medium size.

(e) Coarse Aggregates:

The coarse aggregate shall be of hard granite stone and shall generally confirm to I.S. 389. Porous Course aggregate shall not be used. The aggregate shall be free from clay films and other adherent coatings. Aggregate containing clay films over the stone materials shall be thoroughly washed. The aggregate shall be from approved quarry and crusher broken. Course aggregates shall be composed of particles ranging between the sizes 2.36 to the maximum size as may be specified in the relevant item of work, within the range, the aggregates shall be well graded so as to produce a dense concrete.

(f) Reinforcements:

Mild steel Round Bars, coiled twisted and deformed bars of steel of medium tensile strength will be used as reinforcement as per drawing and design and directions. Mild steel bars shall confirm to I.S.:226/1962 standard quality or IS:432/1966 - Grade-I. Black annealed wire (Not thinner than 24 gauge for tying the reinforcements shall be used).

TECHNICAL SPECIFICATION FOR SANITARY & PLUMBING WORKS

(A) Sanitary ware & allied fittings :

1. General:

All Sanitary fixtures and their allied fittings, should be of first quality, manufactured by Hindustan Sanitary Ware / Parryware / Nycer, These should be approved by the Engineer-in-charge of the G.P.H. Wing before use.

2. Squatting Pattern W.C. (pan) (Odisha Pattern Closets):

The water closet shall be of vitreous China of specified size and pattern, with an integral flushing rim. It shall have the flushing inlet at the back. The Odisha closet should be of approved quality confirming to I.S.S.-2656 (Part-III).

The squatting type Indian Water Closet (Odisha Closet) shall be sunk in floor sloped towards the pan in a workmanship like manner. The closet shall be fixed on a proper cement concrete base of 1:3:6 proportion, taking care that the cushion is uniform and even, without closet, to receive the specified thickness of the floor finishing. The joint between the Closet and the P.V.C. (S.W.R) trap shall be made with W.C. ring and rubber lubricant and shall be leak proof.

3. Flushing Cistern :

The flushing of the Indian water closet (Odisha Closet) shall be done by C.I. or Polyatrine High Level low-level porcelain valve-less syphonic flushing cistern of approved brand and quality I.S.I. Marked and capacity as specified. The connection between the cistern and water closet shall be made by 32 dia O.I. flush pipe, made from G.I. Pipe (Light Quality) or 32 dia P.V.C. Pipe as specified in the tender schedule. The flush pipe with an offset should be fixed to wall by using C.I. Holder Bat Clamps. The capacity of the cistern should be 10 Ltrs. as per I.S.S. 15 Ltrs. In case of low-level cisterns. The Cistern shall be fixed on cast Iron or Rolled Steel Cantiliver Brackets (Bulltin type), which shall be firmly embedded in the wall, with C.C. 1:2:4. The Cistern shall be provided with 20mm dia P.V.C. Overflow Pipe with fittings, which shall terminate into mosquito proof coupling secured in a manner that will permit it to be readily cleaned or renewed.

The 32mm dia Flush Pipe shall be connected to the Water Closet by means of approved type joint. The Flush Pipe shall be fixed to wall by using C.I. Holder Bat Clamps. The bend and the Offset as required in the Flush pipe shall be made cold. The inside of the Cistern shall be painted with two coats of approved black bitumen paint. The Outer face of the Cistern, Brackets Overflow pipe and Flush Pipe etc., shall be painted with two coats of any synthetic enamel paint of approved shade and make, over a coat of priming. The cost of the rate quoted for the flushing cistern. The inlet connection to the Cistern shall be made with 450 mm 1 cmg 15 mm dia P.V.C. Heavy type connection Pipe.

4. Wash Hand Basin:

The Wash Hand Basin shall be of the White Vitreous China of approved quality, make and brand I.S.I, marked. It shall be one-piece construction with an integral combined overflow. The size of the basin shall be as specified. Each basin shall be provided with one 15 mm dia C.R Brass Pillar Tap, 32mm dia C.R Waste, C.R. Chain and Rubber Plug, Unions, Joints, C.P Bottletrap cast complete in all respects of approved quality.

The Basin shall be supported on a pair of R.S. or C.I. Cantilever brackets (built in type) embedded and fixed in wall with cement concrete, 1:2:4. These brackets shall be painted to the required shade with two coats of approved synthetic enamel paint over a coat of priming.

The waste of the Basin shall discharge into a floor trap or Channel through bottle traps as specified. One 32mm dia C.P. Bottle Trap is to be fixed to the Waste of the Basin & the outlet of the bottle trap is to be connected to the waste pipe to discharge the waste to the Pipe, to discharge the waste to the aforesaid floor trap. The inlet connection to the Basin shall be made with 450mm Long 15mm dia Heavy type P.V.C. connection pipe.

5. Kitchen Sink:

Unless otherwise mentioned the Kitchen Sink and drain board (if used) shall be of white Vitreous China or fire clay as specified and approved quality, make a brand, confirming to T.S.S, It shall be of one piece construction with integral combined overflow. The size of the sink and Drain Board shall be as specified.

Each Sink shall be provided with one 15mm dia C.P. brass, Bib Cock, long body, 40mm C.P. Waste with overflow C.P. Chain & Rubber Plug, unions etc., complete in all respects as specified and of approved quality.

The sink shall be supported on a pair of M.S. or C.I. Cantilever Brackets (Built in type) embedded or fixed in position in the wall by Cement Concrete 1:2:4. The brackets shall be painted to required shade with two coats of approved synthetic enamel paint over a coat of priming. The waste should discharge into a floor Trap or Channel. The waste pipe should be 40mm dia P.V.C. Pipe jointed to the waste of the Sink with a Brass union nut.

6. Standing Urinals :

The Urinals shall be flat pattern lipped front basin of required dimension of White Vitreous China and one piece construction with internal flushing box rim of an approved make and brand as specified. It shall be fixed in the position by*using wooden plug embedded in the wall with screws of proper size. Each Urinal shall be connected to a 40mm dia RV.C. Waste Pipe, which shall discharge into a channel of floor trap. The lip of Urinals shall be kept at 525mm from floor level, while fixing the Urinal on wall.

Where no. of Urinals are fixed in a line, the distance between the centres to centre of each Urinal shall be kept 750mm. and each Urinal should be separated from one to other by a partition plate. The centre to centre of partition plates shall be kept 750mm apart. The partition plate shall be of one-piece 25mm thick marble plates, cut to size and front corners rounded. The partition plates shall be embedded in wall with cement concrete and finished smooth. The bottom of the partition plate should be kept 350mm above floor level and top should be kept at 1250mm above floor level. The plates should project 600mm from wall surface. The width of the plates to be embedded inside the wall should not be less than 100mm. The thickness of the plates shall be minimum 25mm.

For flushing the Urinals each Urinals shall be connected with one 20mm dia G.I. Pipe (Medium Class), One of this pipe shall be inserted into the inlet of the Urinal and jointed with Jute and putty where as the other end is connected either with a Tee or Bend with the 25mm dia size Water Pipe Line fixed on the wall horizontal above the Urinals. In each 20mm dia flush pipe one 20mm dia cum-metal Gate value, the water will flow to thermal of Urinal through the inlet pipe and flush the Urinal. After flush, the valve can be closed to avoid wastage of water. One 40mm dia P.V.C. Waste Pipe shall be connected to the waste of each Urinal, to discharge the Waste into the Channel of Trap. One end of this Waste pipe shall be made a cup size to fit into the projected waste and tightened with screws.

7. Squatting Urinal Plates:

The Urinal Plates shall be of White Glazed Vitreous China with integral flushing rim of size 450 X 350mm of approved make and brand as specified. There shall be white vitreous channel with stop and outlet pieces in front. These plates shall be fixed on C.C. at 75mm to 100mm above floor level.

For flushing arrangement, one 25mm dia G.I. Common Water Pipeline (minimum size) shall be fixed on the wall parallel to floor. For each urinal one 20mm dia G.I. Branch Pipe shall be taken down up to 200mm from

floor level just at the centre of each plate, in which one 20mm dia Gate Valves is fixed at 350mm above floor level. At 1200mm height, the 20mm dia flush pipe shall be divided into two branches shall be taken downward and connected to the inlets of the urinals plate at floor level. By operating the valve as above, the water will rush into the rims of the urinal plate and flush it.

Where there are number of urinals fixed in a line, each urinal should be separated by a partition plate fixed in the centre of two urinal plates. The centre-to-centre distance of the partition plates shall be kept 750mm.

The partition plates shall be of one-piece marble plate, 25mm thick, cut to sizes and front corners rounded. The plates are to be embedded in wall with cement concrete and finished smooth. The bottom of the partition plates shall be kept flushed to urinal top level and the top level of partition plate shall be kept at 1200mm from the urinal plate top and the projection from the wall shall be 600mm. The width of the plate to be embedded inside the wall should not be less than 100mm.

(B) Soil and waste pipes and fittings

1. H.C.I. Pipe Fittings

The Cast iron Soil, Waste and design pipes (spigot & socket joints) shall be of make and brand as specified (under specification of materials), confirming to I.S.S. 3989-1970 and ISI marked with approved clamps are to be used. The pipes and fittings shall be free from cracks, laps, pinholes, and other imperfection and carefully cited. The access door fittings shall be designed and made so as to avoid dead space in which filth may accumulate and door shall be provided with 3mm thick rubber insertion packing when closed and bolted.

WEIGHT OF HCI PIPES

2. Dia of Pipe in mm	Thickness in mm	Length of pipe & width piece	
		1.8mtr. D/s	1.8mtr.
50 mm	5mm	16.00kg.	15.00 kg.
75 mm	5mm.	13.83kg.	16.52kg.
100 mm	8mm	24.00kg.	22.00kg.
150mm	8mm	26.70 kg.	31.82kg.
	Tolerance 10%		

3. The jointing should be done with pig lead confirming to I.S. 782-1966 - grade 99.94. The spigot and of Pipes and Fittings should enter into the socket end. The annular space shall be packed with spun yarn gasket, compacted so as to leave a depth for receiving required quantity of lead in a continuous pouring from ladder. After pouring lead in the joints in full, caulking is to be done three times round with the caulking chisels, so that the joints may be sealed with lead. The depth of lead in a point should be 35mm and the rest depth of the joint should be packed with spun yarn Gasket.

4. Requirement of lead and Gasket cement for jointing H.C.I. Pipes (Each Joint)

Dia of pipe in mm.	Lead in kg.	Gasket in kg.	Cement kg.
(same for lead & cement joint)			
100	1.2kg.	0.13kg.	0.12kg.
50	0.36 kg.	0.06 kg.	0.06 kg.

5. The inside of the pipes and fittings shall be well coated with special tar or bitumen solution of approved quality. Where the pipe and fittings are laid below the ground, the outer surface of the pipes and fittings shall also to be painted with two coats of black anticorrosive paint of approved quality. On completion of the work, the exposed pipes and fittings are to be painted with two coats of synthetic enamel paint of approved colour & quality over a coat of red oxide primer. The cost of paint should include in the rates.

6. Soil pipes for ventilation Is to be connected to the sewer at its floor and without a trap and be carried to such a height, at least above roof level, to prevent damage to health by commission of foul air, The pipe shall terminate as open and protected by a cowl.

7. The waste water pipe shall be connected with the nearest yard gully or a surface drain.

8. The traps should be of hard cast iron and should have a water seal at least 50mm deep.

9. All the soil and waste pipes and fittings, after laid and fixed shall be smoke tested, to the entire, satisfaction of the Engineer-in-charge. The Cost of testing is to be included in the offer. For smoke-test the materials usually burnt greases cotton waste, which gives out a clear pungent smoke, which is easily detected by sight and smell. Smoke shall be pumped to the drains from the lower end from a smoke machine, which consists of lower, and burner.

a) P.V.C (S.W.R.) & P.V.C. (Rigid) Pipes & Fittings

9.01. The P.V.C. (S.W.R.) and P.V.C. (Rigid), soil Waste & Vant Pipes (Spigot & Socket, & couples joints), shall be of make & brand as specified (Under Specification of materials) confirming to I.S.S., B.S.S. & DIN are tube used.

The main specification of P.V.C. Soil & Waste pipes and fitting are as below.

- a) Materials – Un-plasticized Poly Vinyl-Chloride (UPVC).
- b) Color - Grey
- c) Dimensions -
 - (i) Diameter - Fittings - 75mm/110mm/63mm & 63mm.
 - Pipes - 75mm, 110mm, on lengths of 3.or 6 mtr.
- d) Wall thickness - Fittings - Minimum 3.2mm at any port.
 - Pipes - As per application
 - For Rainwater - 75mm-1.8. to 2.2.mm, 110mm-2.5. to 3mm
 - Waste & Soil - 75mm -1.8 to 2.2mm, 110mm -2.5 to 3 mm, 63mm –
 - Underground drainage with
 - light/NIL Traffics - 110mm - 2.5 to 3mm
 - Light/Nil in Heavy traffic - 110mm 3.7 to 4.3mm
- e) Standard Confirming to Attributes Confirms to Standard No.
 - i) Fittings & Wall B.S.4514, DIN 10531
 - Thickness - DIN 19534 I.S.7834 - PVC (Rigid)
 - ii) Pipe Wall thickness - IS 4905
 - iii) Rubber ring - IS 5382
 - iv) Fitting dimensions - DIN 19531 - P.V.C.,
DIN 19534-S.W.R.
IS - 7834 V.C. (Rigid)
 - v) Pipe Dimensions - IS 4985

b) Laying instructions & Jointing Procedure

1 Jointing of P.V.C. (S.W.R.) Pipes & Fittings

Clean the outside of the pipes spigot and the inside of the sealing groove of the fitting. Apply the rubber lubricant, to the spigot end, sealing ring and pass the spigot end into the socket, containing sealing ring, until fully homed. Mark and position of the Socket edge with pencil on the pipe, then withdraw the pipe from the socket by approx. 10mm towards thermal expansion gap.

2 Fixing of the Pipes and fittings on wall surface.

P.V.C. pipes both (S.W.R.) & (Rigid), fixed on wall surface, are to be supported by P.V.C. pipe clips, specially made for these pipes, with horizontal runs, the pipe clips should be spaced at intervals of more than 10 times the outside diameter of the pipes. In vertical lines the clips are to be spaced at intervals of one meter to a maximum of two meters according to pipe diameter. •

3 Jointing of P.V.C. (Right) Pipe Fittings

Clean the Outside of the pipes and inside of the socket of a fitting of the inside of the couplers (where 2 plain ended pipes are jointed) of. Apply solvent cement solution, evenly and smoothly on the outer surface

of the pipe end and inside surface of either the coupler of the socket and pass the pipe end into the socket of the fittings. Up to full depth of socket. In case of jointing 2 plain-ended pipes 1st. push the coupler up to half depth on the end of one pipe and the outer half of the coupler should be pushed to the end of other pipe and thus, both pipes are jointed.

4 Fixing of P.V.C. pipes and Fittings through holes of Walls or Chajja of roofs etc.

The Wall/concrete slots should allow for a stress free installation, Pipes and fittings to be inserted into the slots, without a cement base, have to be applied first with a thin coat of P.V.C. Solvent cement, followed by sprinkling of dry sand (medium size). Allow it to dry. This process gives a sound base for cement concrete fixation, around the pipes/fittings while mending the damages.

5 Anti-syphonage Pipes

All the antisiphonage pipes and fittings to be used are of 63mm. If these are not available under the items of P.V.C. (S.W.R.) materials, 63mm pipes and fittings, manufactured under P.V.C.(right) materials can be used, since the raw materials for both is same.

6 All traps should have a minimum water seal of 50mm as per I.S. 5329 and IS 2556 (Part XIII). Where antisiphonage connection is required, the traps to be supplied and used should have a 50mm antisiphonage vent horn on the outlet side. All the Traps used with the closets, should be of the size 125mm X 110mm i.e. Inlet (Socket end) of 125mm & outlet (spirit end) of 110mm only.

7 Installation of Water Closet

Determine the correct Location of the P/S Trap & set on a firm base, relative to the floor finish by pouring concrete on a slab. Bedding can be carried out by pouring concrete around the trap, ensuring that the traps outlet is left clear of concrete. Place the W.C. Connector ring to the socketed end of 125/110mm R/S trap. Apply rubber lubricant on W.C. Connector ring as well as outer side of water closet (connection point) and now complete the joint by pushing the W.C. to home of 125mm socket of the trap.

8 P.V.C. (Rigid) Pipes and Fittings

63mm (O.D.) P.V.C. Pipes to be used for these work either in antisiphonage system or elsewhere, should be of "Quick Fit" Pipes Class 2 (4kg. F/Cm²), Quick Fit, Pipes have one end socketed. The P.V.C. (Rigid) fittings, such as 63mm elbow, 63mm equal Tees 110mm x 63mm reducer etc. used in the work, should be of injection-molded fittings.

9 One 'jointing rubber ring will be available, with each P.V.C. (S.W.R.) pipe and fitting and hence, the cost of therein will not be added in the joint.

10. Measurement

All pipes shall be measured not/length as laid or fixed and shall be measured over all fittings such as bends, junctions, traps etc. The length shall be taken along the counter line of the pipes and fittings. Fittings will be counted extra over.

31. Before fixing and painting, the pipe shall be tested hydraulically to pressure 0.4Kg/Cm² for pipes under I.S.-1729/1964 and at a pressure 0.7 Kg/Cm² for pipes under I.S. 3989-1970 without showing any sign of leakage, sweating of or her defect of any kind. The pressure should be applied internally and shall be maintained for not less than 15 seconds.

c) Water Supply Pipes and Fittings:

1. Materials.

All galvanized Iron Pipes are to be of mild steel continuous welded, screwed tubes, medium quality confirming to I.S.S. and bearing ISI Marks manufactured by reputed Firms and approved brands as specified. The pipes shall confirm to LS.1239 (Part-I) -1975. All G.I. Fittings shall be of 'R' Brand manufactured by M/s. R.M. Engineering Ltd., Ahmedabad and 'C' brand manufactured by Present Engineering works or equivalent best quality.

2. Laying of Pipes

The layout of the mains and service pipe set etc., will be done in accordance with the drawings. The contractor is to mark out the exact position of the pipes and fittings at site and take approval of the Engineer In-charge, before taking up the work.

3. Where the Pipes are laid, underground these must not be laid less than 450mm below ground level and coated with one coat of approved black bituminous paint. For laying the G.I. pipes and fittings

below ground level, the width and the depth of the trenches for different dimensions for the pipes shall be given as below :

Dia of Pipe	Width of Trench	Depth of Trench
15mm to 50 mm	300 mm	600 mm
65mm to 100mm	450 mm	750 mm

The pipes shall be laid on a layer of 75mm thick sand and filled up with sand up to 75mm above pipes and the remaining portion of the trench shall then be filled up with proper ramming as described in "Excavation and refilling". The surplus earth shall be disposed of as directed.

Thrust or anchor blocks of cement concrete 1:2:4 in hard granite chips shall be constructed on all bends or branches to transmit the hydraulic pressure without impairing the ground and spreading it over a sufficient area. Pipes shall not be laid to pass through manholes, catch pit, drain, where, it is unavoidable the pipes shall be carried in sleeve pipe of M.S./G.I., as approved by the Engineer-in-charge. The rate should include such a situation.

4. Where Pipes run along walls, the same are to be fixed to the wall with holder bat clamps /M.S. Hooks as below:

Dia of pipe in mm	15	20	25	32	40	50
Horizontal line	2m	2.50m	2.50m	2.50m	3m	3m
Vertical line	2.5m	3m	3m	3m	3.5m	3.5m

Where the pipes are passing through the R.C.C. / Masonry wall / Column / beam or pillars, these must pass through the appropriate higher sizes of C.I./G.I Sleeve Pipes and are to be included in the rates. In case the pipes are embedded in walls and floors it should be painted with one coat of anticorrosive paint of approved quality. ,

All pipes should be fixed horizontal and vertical. For taking the pipes through the walls and floors & roof slabs etc. the holes shall be made by filling with chisels or jumper and not by dismantling the brickwork or concrete. After fixing, the holes shall be made good with cement concrete 1:2:4 and properly finished with C. Plaster 1:4 to match the adjacent surface. Union Nuts are to be provided in each of the vertical riser or drop on and from G.I. Tank and near the Valve and as and where necessary. The long screw fittings of 3 mtrs. for long horizontal lines and inside the lavatory / Kitchen etc.

5. After laying and jointing the pipes and fittings shall be inspected under working condition of pressure and flow. Any joint found leaking pipes should be removed and replaced without extra cost. The pipes and fittings after they are laid shall be tested to hydraulic pressure of 6 Kg/Cm². The test pressure should maintain without loss of for at least half an hour.

6. Painting

On completion of the test, the exposed pipes and fittings are to be painted with two coats of synthetic enamel paint of approved color and brand over a coat of priming.

7. Measurement

The length shall be measured in running meter. Correct to centimeter for the finished work, which shall include the pipes and fittings such as Bends, Tees, Elbows, etc., but excludes brass or Gun-metal fixture like tap, Cooks, Valves, PVC connection pipes etc.

8. Ball Valve

The ball valve shall be high or low pressure class as stipulated in the Tender Schedule and shall confirm to I.S. 1703-1968, The nominal size of ball valve shall be that corresponding to the size of Pipe for which it is used. The Ball valve shall be of brass or gun-metal and the float for low pressure polyethylene and for high pressure in copper. Each and every ball valve while in closed position shall withstand and internally applied hydraulic pressure of 20 Kg/Cm² for a minimum period of two minutes without leakage or sweating.

Every high pressure ball valve when assemble in working condition, with the float immersed to not more than half its volume shall remain closed against a test' pressure of 10.5Kg/Cm² and a low pressure ball valve against a test pressure of 5.3 Kg/Cm².

Polyethylene floats shall be watertight and non-absorbent and shall not contaminate water and with do

jointing adhesive jointing parts. The minimum thickness of the copper sheet used for making copper floats shall be of 0.45 mm. The thickness of materials of the float shall be uniform throughout.

9. Ferrule

The ferrules for connection with C.I. main shall generally confirm to I.S. 2692-1964 and shall be of nominal bore as specified. The ferrule shall be fitted with 3 screw and 1 plug or valve capable of complete cutting off the supply to the connected pipe as and when required. For fixing the ferrule, the C.I. main shall be drilled and tapped during non-supply hour at 45 to the connected Pipe as that when required. The ferrule must be so fitted, that no portion of the sunk shall be left projecting within the main on which it is fitted. After the ferrule is connected, one C.I. bell mouth cover or with bricks (as specified) shall be kept over the ferrule to cover the ferrule to protect it and the cost thereof is to be included in the item, even if there is no mention.

10. Non-return Valve (Check Valves)

The non-return valve shall be of Brass or Gunmetal and shall be of horizontal or vertical flow type and of the size as specified and confirm to I.S. 7810-1959 and I.S. 778-1957. The approximate weights of the valves are given below.

Dia in mm	Horizontal type (in kg)	Vertical type (in kg)
15	0.30	0.25
20	0.55	0.25
25	0.90	0.75
32	1.25	0.90
40	1.70	1.20
50	2.90	1.45
65	5.25	2.15
80	7.70	4.10
	±Tolerance 5%	

11. Foot Valve

Foot valve is generally placed at the lower end of the suction pipe of the centrifugal pump to prevent the suction pipe from emptying. On vertical non-return valve may also be fixed in place of foot-valve. The foot valve shall confirm to I.S.038-1967.

12. Water meters (Domestic types)

Water meter up to 50mm nominal size shall confirm to I.S.-779-1968. The meter body shall be of bronze/ Gun-metal and marked to read in liters complete with registration box and lid. The water meters shall be provided with Strainers. Strainers shall be of material, which is not susceptible to electrolyte, clean and shall be fitted on the inlet side of water meter. It shall be possible to remove and clean the strainer and not permit disturbing the registration box. The offer should include the same. The water meters shall bear ISI Mark.

13. Bibcock & Stopcock

These shall confirm to I.S.781-1967 and bear ISI Mark. The bibcock is a draw off tap with a horizontal inlet and free outlet and stopcock is a valve with a suitable means of connection for Insertion in a pipeline for controlling or stopping the flow. This shall be of screw down type. The cock shall open in anti-clockwise direction. The stopcocks should be of C.P open type/concealed type/angle valves type as specified in tender schedule. Bibcock should be also C.P Brass bibcock.

14. Full way Valve (Brass)

Full way valve is a valve with suitable means of connection for insertion in a pipeline for controlling or stepping the flow. The valve shall be of brass fitted with a cast-iron wheel and shall be of gate valve type confirming to I.S, 780-1960, opening Full way and of the size as specified.

Dia in mm	Flanged End Valves in kg	Screwed End Valve in kg
15	1.021	0.567
20	1.503	0.680
25	2.498	1.077
32	5.232	1.559
40	6.082	2.268
50	6.691	3.232
65	10.149	6.840
80	13.281	8.845

15. Gun Metal Full way Valve

This shall be of the Gun-Metal fitted with wheel and shall be of Gate-Valve type opening full way. This shall confirm to I.S, 778-1971. Class I. The Valves should bear ISI Mark.

TECHNICAL SPECIFICATION FOR STONEWARE PIPE ETC.

1. Stoneware Pipes (Materials)

The S.W. pipes & fitting should be of Grade 'A' confirming to I.S 651/1965. The pipes shall be sound, free from visible defects such as fire crack or hair crack and flow or blister. The pipes shall give a sharp clear line when struck with a light hammer and should be perfectly salt glazed.

Internal dia of Pipe in m.m.	Thickness of the Barrel in m.m.	Weight of each pipe in kg.
100	12	14
150	16	23
200	17	33
230	19	44
250	20	52
300	25	79
350	30	100
400	35	125
450	38	147

The length of pipes is 600mm exclusive of the internal depth of socket.

2. Excavation of Trench for laying Sewer Pipes

The trenches for the pipes shall be excavated to the lines & level as directed. The bed of the trench shall have to be evenly dressed throughout from one change of grade to the next. The gradient is to stout by means of sight rails and boning rods and required depth be excavated at any point. The depth of the trench shall not less than one meter, measured from top of the pipe to the surface of the ground under roads and not less than 0.75mm elsewhere. The width of the trench shall be the nominal diameter of the pipe plus 350mm. The bed of the trench if in soft or made up earth, shall be well watered and rammed before laying the pipes and the depressions if any shall be properly filled with sand and consolidated in 200mm layers. Depending on soil condition, piling may even be necessary if so desired by the Engineer In-charge. If rock is met with, it shall be removed 150 mm below the level of the pipe and the trench will be refilled with sand and consolidated.

The excavated materials shall not be placed within One Mtr. or half of the depth of the trench whichever is greater from the edge of the trench. The trench shall be kept free from water. Shoring and shuttering shall be provided wherever required. Excavation below water level shall be done after dewatering the trenches.

After the excavation of the trench is completed, foundation of cement concrete 1.4.8 in hard granite metal (size 40mm) shall be laid with proper level all along under the length of the pipe with launching on all around concrete as per drawing.

3. Laying, Jointing, haunching of the Pipes and fittings.

Drain Pipes (S.W. pipe & other pipes used for drain and Sewer) shall be laid in straight lines and to the even gradients as shown in the layout drawings. The socket and of the pipes shall face stream. Adequate care shall be exercised in setting out and determining the level of the pipes and the contractor shall provide suitable instruments, templates, sight rails, boning rods and other equipments necessary for the purpose. In the case of pipes with joints to be made with loose collars, the collars shall be slipped on before the next pipe is laid. In those joints, a tight ring of twisted tarred jute soaked in cement mortar filling to ensure proper alignment and prevent. Cement entering the pipes, Cement compound joints is to be finished with proportion 1.1 with 45 beveling. The joints are to be kept wet with wet bag until the same are properly set with. The cement mortar joints shall be cured at least for 7 (Seven) days.

In the case of S.W. Pipe joints (socket & spigot), they should be caulked first with tarred jute (Spun) of required diameter, almost quarter depth of the socket, after which cement mortar 1:1 is pushed in with wooden chisel and finishing beveled at outside at 45 degree. Instead of jute of hump rubber gasket of proper size may also be used. The whole joint must be cured for not less than three days. In case of pipes less than 250mm dia, joints should be made at ground level with three pipes at a time and for larger ones two pipes at a time and after curing they should be soiled in foundation with the help of the ropes. All pipes should be properly launched with cement concrete 1.3.6 with washed gravel where the pipes are crossing the drain or all round concrete 1.3.6 with washed gravel is to be done to 150 mm thick over the barrel of the pipe. The whole of the drain work shall be tested when laid, and at the completion of the contract, to the satisfaction of the Engineer-in-charge and shall be retested if necessary until found satisfactory. The test shall be made by means of water under pressure at the highest point of the Section under test and providing an air pipe at the lower end of the line. Maximum head of 5 (five) feet (1.5m) must be maintained.

4. Excavation and refilling.

Excavation for drain and pipe trenches shall be straight and to correct depth and gradient. The trench bottom shall be of required width as per specification to allow working space for pipe jointing.

Excavated materials shall be dumped away from the site as directed by Engineer-in-charge. Suitable precautions are to be taken to prevent in flow of water into the excavated area, during construction.

The contractor at his own expense shall pump out or otherwise remove any or all water which during the continuance of contract may be found in the excavated trenches to keep the trench clear of water during the work under progress. The pipeline shall not be refilled and covered, until the line therein has been passed and tested.

5. Buried Services

All pipes, cable mains and other services exposed by the excavations shall be effectively supported by timbering or other means for which no extra payment will be allowed. The contractor shall be responsible for any damage occurring to buried services and make good the same at his own cost to the satisfaction of the Engineer-in-charge.

6. Trench condition :

Where a trench is excavated and refilled after laying the pipe, settlement of the earth in the refilled trench take place. The filling above the top of pipe, settles relatively, more than the sides of the trench, thereby developing frictional resistance. The contractor is required to take special precaution against this, while refilling the trenches. Procedure for backfilling as stipulated earlier should be strictly followed.

7. Inspection Chambers/Manholes

At every change of alignment, gradient or diameter of a drain there shall be a manhole or Inspection Chamber. The maximum distance between man hole chamber shall be 30 metres for the linelaid straight.

All manhole and inspection chamber shall have internal dimension as shown in drawing and B.O.Q. The depth of invert shall be fixed to the gradient. The foundation for Manhole shall be 175mm thick & with cement concrete 1.3.6 in hard stone metal / granite metal of 40mm size. The concrete shall project 150mm beyond the external faces of the brickwork.

The brick masonry shall be done in cement mortar in the proportion of 1:4 and thickness of the brick

wall should be 250mm thick up to 1200mm depth from Ground Level and beyond that the wall thickness shall be maintained 375mm. The inside surface of the walls of the chamber, shall be finished with cement plaster 1.3 and outside with cement pointing 1.3. In addition to this, the inside surface should also be provided with cement punning.

On the top of base concrete channeling on C.C. 1.2.4 with granite chips is to be done keeping the diameter equal to the dia of drain pipe and depth equal to half of the dia of pipe. The channel, 'should¹ be done longitudinally at the centre, connecting both the ends of the pipe. The channel is to be hunched up with concrete 1.2.4 with hard granite chips of size 12mm sloping upwards from the edge of channel to meet the side of chamber at gradient of 1.6. The channel and benching are to be finished smooth and cement mortar 1.3 and punning unless it is unavoidable. The branch should deliver sewerage in the Manhole in the direction of main flow and the junction must be made with care so that the flow in the main is not impeded. Channels for drains coming from the side of the Manhole Chamber, shall be curved to meet the main drainage channels.

The Manhole and Inspection Chambers shall be covered with R.C.C. cover slab of thickness 100mm to 150mm according to the requirement at site. One C.I. Manhole cover of diameter and weight as stipulated in the tender schedule shall be fixed, on the cover slab. Unless otherwise mentioned the C.I. Cover and Frames and shall conform to I.S. 1726/1960. Heavy duty covers etc., under heavy vehicular traffic condition and capable of bearing wheel loads up to 11.25 tons, are to be used and medium duty under light type wheel traffic loads and light duty for domestic premises are to be used. Covers and Frames shall be clearly cast, double water seal type and they shall be free from all and sand holes. The cover shall be gas tight and water tight with proper water-seal. The C.I. Cover and frame shall be coated with two coats of black bituminous paint. The frame of Manhole cover shall be fixed on the slab while the slab is cast. R.C.C.M.H. covers of 50cm dia and 100mm thickness shall be fitted in line of C.I.M.H. cover if stipulated in the bill of quantity of the tender schedule.

8. Gully Trap Chamber

The size of chamber for 100mm HCl yard gully shall be of 250mm X 250mm (Inside). Foundation with 100mm thick cement concrete 1.3.6 with hard granite metal of size 40mm from outer surface of wall and Brick work in cement mortar 1.4, 125mm thick, depth up to 600mm maximum. The finishing of masonry wall both inside and outside should be done in cement mortar 1.4 cement punning should be provided on the inner surface the trap should be buried in cement concrete 1.2.4 in H.G. chips up to the mouth and one hinged C.I. Grating of size 300mm x 300mm are to be fixed on the top of mouth of Gully trap to arrest rubbishes shall be provided. The foundation, should project 75mm from outer.

9. Kota/Marble Stone flooring

The Kota/Marble stones shall be of thickness specified but not less than 20mm and of uniform with edges absolutely square & straight. They shall be laid in Cement Mortar (1.4) over masonry or concrete base. The sides of the stones shall be arranged to butt against each other truly so as to come the joints practically invisible and certainly not more than 0.8mm in width anywhere. The joints shall not be filled with mortar but may afterwards be grouted with neat white cement mixed with matching colour pigment. When the floor has completely set, it, should be polished with pumice stone and finally with pads of felt.

10. Glazed tile dado

The glazed porcelain tiles shall be of approved size and thickness 5mm to 6mm with edges absolutely straight & surface accurately plain. They shall be fixed in 6mm. thick cement mortar 1.3 using cement slurry over pre-cement plastered base. The sides of the tiles shall be arranged to but against each other truly so as to make the joints practically invisible. However, the joints may be grouted with white cement mixed with coloring materials to match the tiles and neatly cleaned leaving no trace of excess grouting materials. The tiled surface and edges should be perfectly vertical and straight. The corner points must be normally right angled unless the site condition demands otherwise,

ADDITIONAL APPENDIX TO BILL OF QUANTITY:

(For P.H. Items of Work)

1. The quantities of items mentioned in the tender schedule may increase or decrease during execution of works but the contractor will complete the work as per his tendered rates in accordance with the instruction of Engineer in charge of G.P.H. wing.
2. **Specification:** The standard PHD and PWD specification will be followed for execution of work. During the course of execution of work, the instructions of the Engineer in charge shall be final and binding.
3. The Sales Tax element should not be added to the analysis of rates and the previous practice should be followed as per the Works Department letter No.IIT.22-89-18170 dt.18.7.1989
4. There should be no clause either in the tender or in agreement for payment of any additional claim on account of Sales Tax on completed works which will be deemed to be recovered by existing omnibus stipulation as per the works Department letter No.TIT 22/89-18170 dt.18.7.89.
5. It is the responsibility of the Contractor to arrange watch and ward to the installations until testing commissioning and handing over for which no extra payment towards watch and ward will be paid,
6. The contractor shall maintain a separate site order book for P.H. portion of work.
7. The P.H. portion of work shall be open for inspection by the authorities of P.H. Circle (R&B) Odisha, Bhubaneswar and the higher authorities and instructions imparted during the course of Inspection should be binding on the contractor.
8. Materials not covered by any of the above categories of items in the bill of quantity have to be approved by the competent authorities before utilizing the 'same in works. In such event, the payment of such item will be made as per actual on due approval by the competent authority.
11. All materials required for the work shall be supplied by the contractor as per standard specifications appended with due approval by the Engineer in charge of G.P.H. Wing. In case the materials as per make specified are not available, the materials of equivalent make and as per I.S. Specifications or of best quality when not covered by I.S. Specifications can be utilized on prior approval of concerned S.E./ E.E., GPHD (R&B) Circle/Division or the officers duly authorized. It is binding on the part of the contractor to use such items of materials which are available in the Departmental store and in such case the deduction from the bills will be made at stock issue rates.

TECHNICAL SPECIFICATION OF INTERNAL ELECTRIFICATION WORKS

The details of internal wiring, the position of fittings, fans, switches and plug sockets etc. are indicated in the layout drawings. The position of light fittings, fans, switchboards etc. indicated in these drawings are only for the guidance of the supplier and the actual position of these shall be mutually decided between the supplier and the purchaser. The supplier shall submit the purchaser of his consideration and approval all runs of wiring and the exact position of all the points and the switch boxes first marked on the points buildings.

All internal wiring shall be done in conformity to the latest Indian standard specification/Rules, code of practice adopted by CPWD and other standard practices prevalent in the part of the country. For the purpose of the specification the terminology used shall be as defined in IS:732 and IS:1356 of the definition of points wiring. The installation shall be carried out in conformity to all requirements of IE Act, 1910 and IE Rules 1956.

- a) Ceiling rose in (in case of ceiling and exhaust fan).
- b) Ceiling rose or connector (in case of pendants except stiff pendant points)
- c) Back plate (in case of stiff pendant).
- d) Socket outlet (in case of socket outlet points)
- e) Lamps holder (in case of wall Bracket, batten holder bulk head fitting and similar other fittings)
- f) Call bell / buzzer (in case words 'via' the switch shall be read 'via' the ceiling rose / socket outlet for bell push, where no ceiling rose / socket outlet its provided.

The following shall be deemed to be included in the point wiring

- a) Switch and ceiling rose are required
- b) In case of wall brackets, bulk head fittings, cables as required up to the lamp holders]
- c) Bushed conduit for porcelain tubing where cables pass through walls.
- d) All wood or metal blocks, boards and boxes, R.J. Boxes sunks or surface type including those required for fan regulator but excluding those under the distribution board and main control switch.
- e) Earth wire from 3 pin socket point to the common earth including connection to the earth dolly.
- f) Earth wire of 16SWG/14 SWG/I.G. wire for loop earthing of the fixture
- g) All fixing accessories such as clips, nails, screw, plug, rawl plug, wooden plug, round blocks etc. as required
- h) Joint for junction boxes and connecting the same as required
- i) Connections to ceiling rose or connection socket outlet, lamp holders, switch, fan regulators etc

The point wiring in case of fan and light points shall mean the distance between the control switch and ceiling rose, connect or back plate, socket outlet or lamp holder depending upon the fittings measured along the runs of wiring irrespective of the number of wires in run. In the case of socket outlet points, the length shall mean the distance between the socket outlet and the tapping point of live wire on the nearest switchboard or junction box, as the case may be.

In the case of exclusive socket outlet circuits wired on 'Joint Box' system of wiring, any junction provided for extending the wiring beyond the point referred to, shall be treated as the nearest tapping point. In case of call bell / buzzer points the length shall mean the distance between the call bell and the ceiling rose / socket outlet or the bell push (when the ceiling rose / socket outlet is not used).

Sub main shall include the earth wire of adequate size main distribution Board up to sub distribution board B.B. such wiring has been classified on the basis of length. For the internal lighting, either surface conduct wiring system or recessed conduit or batten wiring system shall be provided as specific in the bill of quantities and working drawings.

LED LIGHTS

1. LED light distribution pattern, illuminance, Luminous flux, chromaticity, color temperature, color rendering Index to applicable standard Lm79 & Lm80.
2. LED lights should be as per standards IEC EN 60598 and IEC61547.
3. LED luminaires should in function in a temperature range -30°C + 60°C under 95% relative humidity condition to simulate adverse operating environment.
4. The LED produces should meet safety standards as per EN60598, EMC/EMI standard as per EN611547/EN 55015 and EN61000-3-2 and 61000-3-3 for Harmonics.
5. The electronic driver should work in the short circuit and open circuit conditions and should work in the voltage range 90V to 3000 volts.
6. LED lighting fixtures should be manufactured with LEDs of only reputed makes such as Panasonic/Havells/Crompton/Philips/Wipro/ Orient etc make
7. The officer-in-charge has reserve the right to inspect and tested the quality in Govt. laboratory to ensure technical qualifications to meet the requirements.
8. LED lights no toxic materials U V and IR spectrum protects insect life.
9. It should be manufacture with die-cast aluminium with required colour as per manufacture for released months.
10. The LED fittings should have a lumen output not less than 100 Lumens/watt.
11. The LED lights Should function 90 to 380V, 50/60 Hz, PF-0.9 (230V AC), Copper temp- 3000K/4000K/ 6000K/ operation temperature - 20°C + 50°C in-gross protection-IP 20, lifespan 30000hrs.

Firefighting

1. No advance payment will be made by the Department. However Part / full Payment shall be made by the Superintending Engineer/Executive Engineer, concerned (R&B) Division after completion of supply, erection testing and commissioning, inspection and satisfactory operation.
2. In the event of failure or refused to execute the order the ISD will be forfeited and the order will be cancelled after the completion time period from the date of issue of the order. In the event of delay in supply erection, testing and commissioning of the materials with work pertaining to order, penalty @ 0.5% of the order value per month delay will be imposed subject to a maximum of 5% (Five percent) along with the EMD.
3. All the materials should be ISI marked and duly approved by the fire Deptt. Govt. of Odisha.
4. 3rd Party Audit should be done by registered agency of Fire Deptt. Govt. of Odisha by the firm.
5. Drawing and designed duly approved by the Fire Deptt. Govt. of Odisha should be submitted before execution of work.
6. If addition alternation required as per guide line of Fire Deptt., the firm will execute the same with due approval of the authority.
7. After completion of the work the firm should made a mock fire drill demonstration and all the testing of the installation, in presence of Engineer-in-Charge, authorised officer of the Fire Deptt. and building authority.

A.C. Machine

The tenders should furnish following documents in cover-1.

1. Detail drawing and design.
2. Technical specification as per manufactures norms supp.
3. Detail of equipments and material supplied.
4. Make, model with individual price may be furnished.
5. All the materials and equipments must be confirming to ISI.

Lighting arrester

Supply, Installation, Testing and Commissioning of Copper Plate Earthing (600x600x3mm) with running Copper Flat 25x5mm from copper plate to funnel of 40mm dia GI PIPE heavy duty with including all accessories, excavation of earth and providing masonry work with cover plate having locking arrangement and and , charcoal, salt , funnel , tinned brass bolt, check nut and washer complete in all respect as per Direction of Engineering -in-Charge. **Conventional Lightning arrester is to be used as per the direction of Engineer-in-charge following the SOR.**

D.G. Set

DG set should be capable of running continuously for unlimited hours in a year, stopping required only for service duration.

Diesel Engine

Duty : Continuous running

Type: 4Stroke, Turbo Charged, aftercooled

Capacity: 32 Liter.

Cooling: Radiator

Governing: Full electronic

Fuel injection: Electronic Unit injectors

Alternator :

Rating: 125 KVA at 415 volt, 0.8pf, 50Hz, 3phase, 4wire@1500rpm.

Duty: Continuous running

Type: Self excited, self regulated, single bearing, IP-23

Efficiency: 92%

- Above engine alternator should be assembled on a steel fabricated common base frame.
- Five sided Acoustic enclosure would be required to reduce noise..
- **2Nos. 12Volt, 180AH reputed make batteries.**
- Set of Antivibration mountings.
- First fill of engine oil.
- Heavy duty silencer.

Design Criteria

The generator asset meets transient response and block loading steps as per ISO 8528-5

Single-Source Supplier

Fully prototype tested with torsional analysis.

ACCEPTABLE MAKES FOR FIRE FIGHTING

S.NO	ITEM	ACCEPTABLE MAKE
1	Pump	Kirloskar / Crompton / ABB /Siemens/LUBI
2	Motor	Kirloskar / Crompton / ABB /Siemens/LUBI
3	Diesel Engineen	Kirloskar / Cummins /LUBI
4	M.S. Pipe	Tata /Jindal / Sail/ (ISI Marked)
5	C.I. Pipe	IS :1537
6	G.I. Pipe	Tata /Jindal / Sail/Nizon/(ISI Marked)
7	C.I. Pipe Fitting	IS :1537
8	Sluice Valve	Kirloskar / Leader /Sant/Zoloto/(ISI Marked)
9	Gun Metal Valve	-Do-
10	Butterfly Valve	-Do-
11	Water Solenoid Valve	-Do-
12	Cushy Foot Mountings	ISI Marked
13	Pressure Switch	Indofus/Groundfos ISI Marked
14	Pressure Gauge	Indofos, ISI Marked
15	Water Level Controller	ISI Marked
16	Batteries	OEM/OEA/Luminous
17	Flow Switch	
18	Internal/External Hydrant (Landing Valve)	Newage / Fireshield/Winco/Minimax/ ASES
19	Hose Reel 20 mm Dia	-Do-
20	Installation Control Valve	-Do-
21	Fire Bridge Intel / Connection	-Do-
22	Sprinkler Head	-Do-
23	RRL Hose pipe 63 mm Dia	-Do-
24	GM Branch Pipe 63mm x 20mm dia	-Do-
25	First Aid Hose Reel Drum	-Do-
26	Power Cables	Havell,s /Finolex / Mescab
27	Control Cables	-Do-
28	Single Phase Preventor	L&T /GE /Siemens/Legrand
29	SDFU / SFU with HRC Fuses	-Do-
30	Starters / Control	-Do-
31	Electrical Panel / System Controller & Control Console	Legrand/Siemens/Schneider/ ASES
ADRESSABLE FIRE ALARM SYSTEM		
01	Microprocessor based Photo electric smoke / Heat Detector	Cooper / Honeywell / Edward/ ASES
02	Microprocessor based Manual call Box	-Do-
03	Microprocessor based Control Module	-Do-
04	Fire Alarm Control Panel	-Do-
05	Steel Conduit	AKG / BEC/RMCON
06	FRLS and Twisted Cables	Finolex /Havell's /RR Kable

Conduit wiring

For recessed conduit wiring system the conduit shall be placed in the ceiling / columns etc. before the casting of the slab or column. The conduit pipes shall be properly positioned and fixed so that it will not be displaced at the time of concreting. The junction boxes provided shall be so arranged that its cover will be flushed with the finished surface of the ceiling or column.

For placing the conduits in the walls, chases of ample dimension shall be made neatly to fix the conduit in a desired manner. The conduit pipe shall be fixed by means of staple or saddles not more than 600mm apart. Fixing of standard bends or elbows shall be avoided and all curves maintained by bending the conduit itself with a long radius will permit easy drawing of the conductors. Suitable inspection boxes shall be provided to permit periodical inspection and removal or replacement of wires if necessary. There shall be mounted flush with the wall with holes in the cover of the box.

The switch or regulator box shall be made of metal on all sides except on the front where backlight sheet or Perspex cover painted to match the colours of the wall shall be used in case of surface wiring system. For recessed wiring system, these boxes shall be made flush with the conduit of each conduit or section shall be completed before conductors are drawn in. The entire system of conduit after installation shall be tested for mechanical strength and electrical continuity throughout the earthing of the entire installation shall be carried out in accordance with I.E. Rules and standards. The number of wires drawn in the conduits shall not exceed the numbers those specified in Indian standard specification No.732.

Main and Sub distribution Boards:

The position of main boards for lighting and sub distribution board for different buildings are approximate and the exact location shall be given to the successful tenderer at the time of installation. The scope of this specification includes installation of the panel boards and distribution boards and making necessary connections. The installation of the boards shall be done strictly in accordance with the details supplied with the specifications; the instructions supplied by the switchgear manufacturer, Indian standard specifications and H.E. rules. The supplier shall submit the details of installations to the purchaser for his consideration and approval, prior to installation.

When the switchboards are wall / column mounted top, they shall, be mounted on a suitable angle iron framework. All the metal supports etc. shall be protected against corrosion. The mounting height for such switchboards shall be such that it can be conveniently operated.

Earthing

Earthing shall generally be carried out in accordance with the requirements of Indian Electricity Rules and the relevant rules and regulations of electrical supply authorities. The complete earthing work for the installation covered by this specifications shall also be provided taking into account Indian Standard Specification No.IS:732 and IS:3043. The earthing system adopted shall also have adequate mechanical strength.

The work shall include earthing of non-current carrying metallic parts of all the equipment, light fittings, conduit pipes, cable and cable supports and earth strips (the design to be approved by the purchaser) and all the inter connection between the earthing system to a value mutually agreed upon between the purchasers and the supplier.

Installation, testing and Commissioning:

The supplier shall be responsible for the installation testing the commissioning of all the equipment and materials supplied by him against this specification. This shall also include the provision of miscellaneous wiring and supports and earthing in compliance with Indian Electricity rules and to the full satisfaction of the Government Electrical Inspector. All small items such as clamps, bolts, nuts, racks, supports, miscellaneous wiring etc. required to make the installation complete, shall constitute the part of major items specified in the bill of quantities and the tenderer should quote for each item taking these into consideration.

The responsibility of the supplier shall include receiving all the equipment and materials at site, storage for required period, handling the same at the site of erection, final execution, erections, revisions of equipment, if any, testing and commissioning and handing over the installation complete in all respect to the entire satisfaction of the purchaser's authorized representative. The supplier shall make good of all the damaged equipment and materials during this period at his own expense. The supplier shall submit sample of each and every equipment and materials for the final approval of the purchaser's representatives

immediately after the acceptance of offer. All the equipments and materials shall be supplied exactly as per to the approved samples. If at any stage the purchaser brings to the notice of the supplier any discrepancy or defect the supplier shall replace the same at his own expense.

The supplier shall render all reasonable assistance to the purchaser in getting the installation approved by the Government Electrical Inspector prior to the energisation and supply necessary drawings, test certificates and both for tests carried out at the factory and site as well as the tests which the inspector may demand. In case any addition of alternations are required, to be made in the installation or in the equipment as per the directive of the Government Electrical Inspector / Local Authorities, the same will have to be carried out by the supplier, at his own expense.

The position of light fittings, main board, switches, sockets and routes of pipes and cables shown in the drawings are only indicative. The actual position of these shall be decided at site at the time of execution joints by the supplier and the purchaser's authorized representative. The position of light fittings, pipes and board if required, to be changed / shifted due to the change in the building design etc by the purchaser's authorized representative, the same shall be carried out at no extra cost.

All the materials supplied to the contractor according to the Contract condition will be subject to inspection and approval of the officer or his representative from time to time. The contractor will provide all facilities of such inspections free of cost. At the time of inspection, the owner or his representative will have full liberty to reject any such materials, which does not conform to the specification / requirement. No claim for any rejected materials will be entertained by the owner. The contractor will remove all rejected materials from site at his own cost. No surplus materials procured by the contractor will be accepted by the owner. The contractor will be responsible to get the Electric installations cleared by the Electrical Inspector of Odisha Government. Only the inspection fee will be reimbursed by Department on production of challan copy.

Installation and Maintenance Tools:

The supplier along with the tender shall furnish a complete list of tools, appliances and accessories required for the installations of switch gear, light fittings, pipes cables and wires.

Drawings:

All drawings, test certificates, instructions manuals etc. shall be in English Language and all dimensions and weights shall be in metric units.

The tenderer shall submit with the tender general arrangement drawings for the installations work, typical methods and cabling and cables supports pipe work and pipe supports, typical methods of earthing and fixing of light fittings earthing etc. as offered by him in the tender.

The contractor shall submit for the purchaser's approval all layout, the general arrangement drawings as well as the typical details of all types of installation work in three sets before commencing the manufacture and the site installations work well in advance so that the site work shall not suffer.

After obtaining approval of the above drawings the contractor shall supply three sets of the following drawings:

- (a) The arrangement and support of conduit pipe
- (b) The position of light fittings, switches / plug socket and switch boards
- (c) Earthing installations
- (d) Layout plan showing the entire cable network

On completion of work, the successful tenderer shall supply one set of tracing in transparent linen and five sets of prints of all drawings incorporating all the changes / modifications affected during the execution of the contract. All wiring diagrams shall indicate clearly, the switch board, the runs of main and sub main wiring and the position of all the points with their controls. All the circuits shall be clearly indicated and numbered in accordance with IS:375. The technical literatures and operating instructions and the maintenance manuals shall also be supplied in triplicate to the purchasers after the completion of the installations work.

Test:

Manufactures standard tests in accordance with Indian Standard and other standards, adopted shall be carried out on all the equipment and accessories covered by this specification so as to ensure efficient and satisfactory performances of all the components and also the equipment as a whole under working conditions at site. The tenderer shall submit a complete list of all such tests. If the purchaser, if so desired for special tests, to be carried out, under certain conditions the same shall be made by the successful tenderer at his own expenses. All equipment shall be tested at site before the commissioning in accordance with the adopted standard and Indian Electricity Rules. Voltage test shall be carried out on each circuit on completion of wiring and cabling.

Technical Data:

The tenderers shall submit with their tender all such technical data, which are required for complete evaluation of the equipment offered. The suppliers shall give complete technical information of the equipment as detailed in Annexure and relevant Indian standards. The tenderer should supply such details of all equipment and materials offered specially with regard to the following.

- a) Fuse switch board and distribution boards
- b) Light fittings
- c) Conduits and the accessories for them
- d) Switches / plug sockets
- e) Cable and wires

The tender shall give along with his tender the following details:

- a) Complete details of earthing electrodes, earthing station and earthing conductors
- b) Details of conduit supports
- c) Details of all the equipment and accessories to be supplied

Exception to Specifications:

The object of this specification is to have all tenderers quote for equivalent materials and workmanship. It is, however, understood the certain manufacturers may not be able to offer as specified in every case, where the tenderer may find it necessary to deviate from the exact letter and not the intent of the specification, he must specifically state what these deviations may be at the time he submits the tender. All deviations must be grouped in one statement. No deviations other than those includes in the tender will be permitted.

PVC insulated Cables and Wires:

For 415V Distribution system, cables of voltage grade not less than 1000V shall be used. These cables shall be heavy-duty class, PVC insulated and PVC sheathed with aluminium/ copper conductors. The wires used in the lighting installation shall be PVC insulated and PVC sheathed copper / aluminium wire in case of conduits wiring and of 660V grade. Wires of different colours shall be made use of for quick\ identification of phase wire / neutral wire etc. All cable of wires shall comply with the requirements regarding the manufacture and testing etc as specified in India Standard Specification IS: 1554 and IS:694.

The length of cables indicated in the bill of quantities and drawings are only indicative and the Successful tenderer will be paid for the exact length of cables laid at site. No joint shall be allowed in a run of cables, which can be covered by a possible drum length of cables.

Fuse switch / switch fuse shall be metalclad dust and vermin proof suitable for use under climatic conditions prevailing at site. Switch fuse / fuse switch units shall comply in general to IS:1567/4064 with regard to design and constructional / features.

The 'ON' and 'OFF' position of the switch handles shall be distinctly indicated and interlocks shall be provided to ensure that the switch cover cannot be opened unless the switch is in the 'OFF' position. Means shall, however, be provided for releasing the interlock to permit closing of switch with cover open for testing purposes. Designs with normal conventional position of switch handles, i.e. with switch handle up in the 'ON' position and down in the 'OFF' position shall be preferred. All live parts inside the switch shall be properly surrounded and inter phase barrier shall be provided.

Switch fuse / fuse switch units, distribution boards shall be provided with necessary metal frame work so that they can be mounted on wall / columns structure etc. as desired. The panel boards, shall be wall

mounted type or floor mounted type as specified in the bill of quantities or drawings. Necessary supporting metal frame of approved design shall be provided for all panel boards

The arrangements of work boards shall be such that the operational handle of the top mounted switches are within the convenient of operators (about 1.2 M from the finished floor level) and proper space shall be provided for the termination of the cable in the switches provided below the bus-bars.

The bus-bars within the bus-bar chamber shall be liberally spaced for taking the riser connection. The bus bars with aluminium conductors shall be provided and PVC sleeves of different colour shall be mounted on them for easy identification, Clamped joints for taking the riser connections, instead of bolted type shall be preferred.

Two bolted type earthing terminals shall be provided on the switch boards. All individual switches shall be connected with suitable size earth wire to the main earthing terminals of the switchboard. Hanger Board and shock treatment / charts shall be supplied wherever required. At the incoming side of each pen phase, 3-neon type indicating lamps should be provided at the main board.

Switches and Plug Sockets

Switches provided for control of light points shall conform to IS:1087 and shall be rated for 5A/15A 250V

Ceiling Fans and Exhaust Fans:

Ceiling fans shall conform to Indian standard specification IS: 374-1960. The fans shall be supplied with all standard accessories like regulator and capacitors etc.

The performances rating of the propeller fans shall in accordance with stipulations of IS:2312. All fans shall be robust in design and construction and shall be supplied complete with wall brackets / clamps etc.

Fluorescent Fittings:

All fluorescent fittings supplied shall confirm in general to IS:1913 and shall be complete with all standard accessories like choke, starter and capacitor etc. The type of enclosure provided for the fittings shall be of that specified in the bill of quantities and the working drawings. The materials of construction for fittings used for outdoor installations and for use in the work anodes shall be such that they shall withstand the atmospheric condition in that area. Lamp holders used shall be fully shock proof, spring-loaded rotary type to ensure positive lamp locking. It should also be not possible to touch live parts of the lamp holder both after the lamp has been taken out and during the insertion or removal of the lamp. The starters shall be designed to give designed starting characteristics that shall promote full lamp life. Starter shall have high mechanical strength and topic proof construction. It should be incorporated with radio suppression capacitor o adequate rating and\ capacity. Power factor improvement capacitors are provided with hermetically sealed housing to ensure long and trouble fee service. Terminal soldering tango shall be provided for easy electrical connections. The capacitors in general shall confirm to IS:1569-1963 and P.F improvement up to 0.95 for twin fluorescent light fittings and 0.9 for single fluorescent light fittings is to be maintained.

The ballast provided in the fluorescent fittings shall generally be in accordance to IS:1534.The ballast should incorporate the following design features.

- i) Low working temperature
- ii) Correct pre heating current for the electrodes
- iii) Proper wave foam
- iv) Small in dimensions
- v) Correct power supply to the lamp
- vi) No hum.
- vii) Easy connection leads.

All the metal construction of the fittings shall be such that they shall:

- 1) Withstand the atmospheric condition prevailing in the area
- 2) Provide maximum mechanical protection to the tubes and fittings accessories. Assists in maximum and uniform light distribution. All fittings shall be provided complete with florescent lamps. All lamps shall confirm to IS:2418.

Incandescent Fittings:

The incandescent fittings shall be supplied strictly as per the details given in the enclosed annexure and bill of quantities, deviation if any regarding design, construction of materials should be specified clearly. All the metal parts used in construction of the fittings shall have no effect due to dust / fumes / gases likely to exist in the atmosphere. All the bolts, clamps, nuts and guard wire etc shall be galvanized. The wall fittings shall be provided with necessary hooks / clamps / supports etc for fixing the light fittings on wall / ceiling etc as detailed in the bill of quantities and the working drawings. Light fittings shall be suitable for connection with 19mm dia. Conduit pipe as required. If fittings are to be connected through PVC cables, glands of adequate size and capacity shall be provided. The lamp holders provided in the fittings shall conform to IS:1528.

C O D E S

Codes shall mean the following including the latest ascendants and / or replacement if any.

- a) Indian Boiler Act, 1923 and Rules and Regulations made there under
- b) Indian Electricity Act, 1923 and Rules and Regulations made there under
- c) Indian Factories Act, 1948 and Rules and Regulations made there under
- d) The minimum wages Act
- e) The Women's Compensation Act
- f) The Payment of Wages Act
- g) The Fatal Accident Act
- h) The Industrial Employment Act
- i) The Employment provident Fund Act
- j) Indian Explosive Act 1984 the Rules and Regulations made there under
- k) Indian Petroleum Act 1934, and Rules and Regulations made there under
- l) A.S.M.E. Test Codes
- m) AIRE Test, Codes
- n) American Society of Materials Testing Codes
- o) Standards of the Indian Standards Institution

1)	Low Tension Circuit Breakers :	IS 2516-1955 Part I Sec.1
2)	Switchgear Bus Bars	IS 375-1963
3)	HRC fuse links	IS 2208-1962
4)	Distribution fuse boards	IS2675-1966
5)	Enclosure for Low Voltage switchgear	IS214701962
6)	PVC Cables	IS1554-1975
7)	Tabular fluorescent lamps for Cameral lighting service	IS2418-1963
8)	Tungsten Filament Lamps for cameral service	IS415-1963
9)	Ceiling Fans	IS274-1966
10)	Flood lights	IS1947-1961
11)	Wall Glass flame-proof electric light fittings	IS2206-1962 (Part 1)
12)	Water Tight Electric Light Fittings	IS3553-1956
13)	Steel Boxes for Enclosure of Electrical Accessories	IS5133-1969
14)	Fittings for Rigid Steel conduit	IS2667-1979
15)	Rigid steel circuits for electrical wiring	IS3837-1966
16)	Accessories for Rigid Steel Conduits for Electrical Wiring	IS3837-1966
17)	Switch Socket Outlets	IS3837-1966
18)	PVC Wiring	IS694-1977
19)	Switches for domestic and similar purpose	IS3854-1966

20)	PVC wiring	IS694-1977
21)	Call Bell and Buzzers	IS2268-1966
22)	Straight through joint boxes and leads sleeves or paper insulated cables-	EID-0032-1964
23)	Earthing	IS3043-1966
24)	Electrical Wiring installations	IS732-1963
25)	Switchgear	IS3072-1965 (Part I)
26)	Lighting protection	IS2309 –1969
27)	Public Address system	IS1882-1962
28)	Low Tension switch use units	IS4064-1978
29)	Code of Practice for Automatic FIRE ALARM system	IS2189-1970
30)	Specification for Heat Sensitive Fire Detectors	IS2175-1977
31)	Guide for Safety procedure in Electric work	IS5216-1969
32)	Rubber Mats for Electric works	IS5424-1969

p) Other internationally approved standards and / or Rules and Regulations touching the subject matter of the contract

Annexure: I**(List of Plants & Equipments to be deployed on contract work)**

Sl. No	Type of Equipments	No. of machines required	Marks
1	Water Tanker of 3000litre capacity mounted with Truck / Tractor	2	08
2	Truck and Tipper	2	08
3	Welding machine	1	05
4	Generator of 40 KVA Capacity and above	1	06
5	Concrete Ready mix Plant of Capacity 15 cum/hr	1	15
6	Concrete Pumping accessories to match with ready mix plant.	1	05
7	Concrete mixer	2	08
8	Concrete vibrator : Needle type	4	10
9	Concrete vibrator : Plate type	2	05
10	Complete staging, shuttering, centering arrangement a. For steel shuttering – Not older than 5 years b. For wooden/Ply shuttering– Not older than 2 years	1200 to 1600 sqm = 10 Mark	20
		1600 to 2000 sqm = 15 Mark	
		2000 sqm & above = 20 Mark	
11	5 Ton Capacity Winch Machine (Mechanical/Power)	1	05
12	Water Pump – 5 HP Capacity- 1No. 1 HP Capacity- 1No.	2	05
	Minimum Qualifying marks - 80	Total =	100

Tenderer(s)is/are required to submit the information in the following Schedules

SCHEDULE - A

CERTIFICATE OF NO RELATIONSHIP

I/We hereby certify that I/We* am/are* **related / not related**(*) to any officer of P.W.D of the rank of Assistant Engineer & above and any officer of the rank of Assistant / Under Secretary and above of the Works Department, Govt. of Odisha I/We* am/are* aware that, if the facts subsequently proved to be false, my/our* contract will be rescinded with forfeiture of E.M.D and security deposit and I/We* shall be liable to make good the loss or damage resulting from such cancellation.

(*) - Strike out which is not applicable

Signature of the Tenderer

Date:-

SCHEDULE - B

EXISTING COMMITMENTS AND ON-GOING WORKS :

Description of works	Place & State	Contract No.	Name & Address of Employer	Value of Contract (₹. In lakh)	Stipulated Period of Completion	Value of works* remaining (Excluding GST) to be completed (₹. In lakh)	Anticipated date of completion
1	2	3	4	5	6	7	8

Note : *The above information is to be certified by the Engineer in Charge / Employer not below the rank of Superintending Engineer/ Executive Engineer or equivalent / Self Certified. In case if there is no existing commitment and ongoing works, the bidder will furnish a declaration in Schedule 'B' (above) that he has no work in hand. If any information found incorrect or the fact of hiding any ongoing works if detected latter the bid shall be summarily rejected and his EMD/Bid Security shall stand forfeited and his registration in the portal shall be blocked and the bidder is liable to be blacklisted as per ITB clause-21.5 and DTCN clause No.116.

Signature of the Tenderer

Date.....

CERTIFICATE OF TOOLS AND PLANTS

I/We hereby certify that the following tools and plants, machineries and vehicles are in my /our possession and in working order.

Sl. No	Type of Equipments	No. of machines required	No. of machines owned / leased/hired
1	Water Tanker of 3000litre capacity mounted with Truck / Tractor	2	
2	Truck and Tipper	2	
3	Welding machine	1	
4	Generator of 40 KVA Capacity and above	1	
5	Concrete Ready mix Plant of Capacity 15 cum/hr	1	
6	Concrete Pumping accessories to match with ready mix plant.	1	
7	Concrete mixer	2	
8	Concrete vibrator : Needle type	4	
9	Concrete vibrator : Plate type	2	
10	Complete staging, shuttering, centering arrangement a. For steel shuttering – Not older than 5 years b. For wooden/Ply shuttering – Not older than 2 years	2000 sqm & above	
11	5 Ton Capacity Winch Machine (Mechanical/Power)	1	
12	Water Pump – 5 HP Capacity- 1No. 1 HP Capacity- 1No.	2	

I/We also note that, non-submission of this certificate will render my/our tender liable for rejection.

Signature of the Tenderer
Date.

WORK EXPERIENCE
LIST OF SIMILAR NATURE OF PROJECTS EXECUTED

Name of Employer	Name of location and name of work	Contract price in Indian Rupees/ Agreement no.	Major Items of works	Stipulated date of commencement / completion of the work as per Agreement	Actual date of completion of the work	Value of work actually executed during last 5 financial years (Excluding GST)		Reasons for delay in starting/ completion, if any
						Financial year	Value (Excluding GST)	
1	2	3	4	5	6	7	8	9

Note: The above information is to be certified by the Engineer in Charge / Employer not below the rank of Superintending Engineer/Executive Engineer.

Signature of the Tenderer
Date.

SCHEDULE – E

INFORMATION REGARDING CURRENT LITIGATION, DEBARRING EXPELLING OF TENDERER OR ABANDONMENT OF WORK BY THE TENDERER

1. a) Is the tenderer currently involved in any litigation / black listing in force relating to the works. Yes / No
- b) If yes: give details:
2. Has the tenderer or any of its constituent partners been debarred/ expelled by any agency in India during the last 5 years. Yes / No
3. a) Has the tenderer or any of its constituent partners failed to perform on any contract work in India during the last 5 years. Yes / No
- b) If yes, give details:

Note:

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

Signature of Tenderer

SCHEDULE – F

AFFIDAVIT

1. The undersigned do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that neither my / our firm / company / individuals _____ nor any of its constituent partners have abandoned any road/ bridge/Irrigation /Buildings or other project work in India nor any contract awarded to us for such works have been rescinded during the last five years prior to the date of this bid.
3. The undersigned hereby authorise(s) and request(s) any bank, person, firm or Corporation to furnish pertinent information as deemed necessary and as requested by the Department to verify this statement or regarding my (our) competency and general reputation.
4. The undersigned understands and agrees that further qualifying information may be requested and agree to furnish any such information at the request of the Department.

(Signature of Tenderer)
Title of Officer
Name of Firm
Date:

**CERTIFICATE OF EMPLOYMENT OF UNEMPLOYED GRADUATE
ENGINEER / DIPLOMA HOLDERS
(For Super Class / Special Class / 'A' Class Contractors only)**

I / We hereby certify that at present, the following Engineering personnel are working with me / in our firm / company and their bio-data are furnished below.

Sl. No.	Name of Engineering personnel appointed for supervising contractor's work with address	Qualification	Date of Appointment	Monthly emolument	Whether full time engagement and continuous	If they are superannuated / retired / dismissed or removed personnel from state Govt./ Central Govt. / Public Sector Undertaking / private Companies and s or any one ineligible for Government service
1	2	3	4	5	6	7

Signature of the Tenderer.
Date:-

SAMPLE FORMATS**UNDER TAKING****This is to certify that**

1. My firm has neither been associated, directly or indirectly, with the Consultant or with any other entity that has prepared the design, specifications, and other documents for the Project nor has any person associated with been proposed as Project Manager for the Contract.
2. My firm has not engaged any agency and any of its affiliates engaged by the Engineer-in-Charge to provide consulting services for the preparation or supervision of this work.
3. My firm has not engaged any Engineer of gazetted rank employed in Engineering or Administrative duties in an Engineering Department of the Government of Odisha or other gazetted officer retired from Government service during last two years without prior permission of the Government of Odisha in writing on or before submission of this tender. I am aware that my contract is liable to be cancelled if either I or any of my employees is found any time to be such a person who had not obtained the permission of the Government of Odisha as aforesaid.

Signature of the Tenderer.

Date:-

- Note:
- i. Strike out whichever is not applicable
 - ii. In case any person is under his employment with due permission from Government, the same may be cited in a separate letter.

RELATIONSHIP DECLARATION**To,****The Tender Inviting Officer,****Subject: (Name of the Work)****Reference : (Bid reference number)****Sir,**

Pursuant to clause 2 of the ITB, it is to inform that I have relative(s) employed as an Officer in the rank of an Assistant Engineer/Under Secretary under the _____ Department. His (Their) details are as follows.

Relationship:

Name:

Designation

Office

Address

Pursuant to clause 2 of the ITB, I am to submit herewith the names of persons who are working under my firm having near relatives to any gazetted officer in the rank of an Assistant Engineer/Under Secretary in the _____ Department.

SINo	Name of the my employee and his designation in the firm	Presently working at	Details of his relatives working in the Department
			Relationship Name: Designation Office Address
			Relationship Name: Designation Office Address

I am also duty bound to inform the relationship of any subsequent employment with any gazetted officer in the rank of an Assistant Engineer/Under Secretary in the _____ Department. **I am aware that** any breach of this condition would render my firm liable for penal action for suppression of facts.

Yours Sincerely

Signature of the Tenderer.

Date:-

MEMORANDUM OF UNDERSTANDING

First Party I Sri/Smt....., Aged years, S/O-, At /
P.O. / Dist-..... (hereinafter called the First Part)

AND

Second Party I Sri/Smt....., Aged years, S/O-, At /
P.O. / Dist-..... (hereinafter called the Second Part) having H.T./ L.T./ M.V. license registration
No..... valid upto

AND WHEREAS the First Party of 1st part is the managing partner of

AND WHEREAS the First Party willing to appoint the Second Party to execute the E.I. portion for the
tender work, “.....”

AND WHEREAS the Second Party accepted the offer of First Party.

NOW THIS DEED OF AGREEMENT WITNESSES AS FOLLOWS;

- 1) That, the Second Party shall do all E.I. works, if the tender is awarded to First Party.
- 2) That, the Second Party shall fulfill all the E.I. works as per the tender schedule by instruction of Engineer-in-Charge.
- 3) That, the First Party shall receive payment, signing the bill the document for the concerned work.
- 4) That, the Second Party shall abide the rules, regulations and specification of E.I. works of above said matter.

In witness where of Both the party have signed in presence of

WITNESS

W₁ -

W₂ -

APPENDIX-A

**GOVT. OF ODISHA
DEPARTMENT OF ENERGY
Notification No.955**

GOVERNMENT OF ODISHA
DEPARTMENT OF ENERGY

NOTIFICATION

No.....9553... Dtd.03.12.2014
EL-MISC-28/13 (Pt.)

In exercise of the powers conferred by sub-section (1) of section 180 of the Electricity Act, 2003 (Central Act 36 of 2003) read with Regulation 29 (1) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation-2010 and in suppression of all previous notifications on the subject, the Governor of Odisha pleased to direct that the grant of licenses, certificates of competency and permits to Electrical Contractors, Supervisors and Electrical workmen respectively shall with effect from the date of issue of the order be governed in the whole of the state of Odisha by following regulations, namely:-

Electrical Licensing Board Regulation, Odisha, 2014.

1. **TITLE AND COMMENCEMENT:-**

- a) These regulations may be called "Electrical Licensing Regulation of Odisha" for issue of:-
 - (i) Licenses to Electrical Contractors.
 - (ii) Certificates of Competency to Electrical Supervisors.
 - (iii) Permits to Electrical Workman.
- b) They shall come into force on the date of their final publication in the official gazette.

2. **DEFINITIONS:-**

In these regulations unless the context otherwise requires:-

- a) "The Board" means the Electrical Licensing Board, Odisha appointed under Regulation 3.
- b) "Secretary" means Secretary to the Electrical Licensing Board, Odisha.
- c) "The Chairman" means the Chairman of the Board.
- d) "Member" means Member of the Board.
- e) "The Electrical Inspector" means the Electrical Inspector to the Government of Odisha.

- f) "Supervisor" means the Electrical Supervisor qualified under these Regulations.
 - g) "Workman" means an Electrical Workman qualified under these Regulations.
 - h) "Form" means a form appended to these regulations.
 - i) "Permit" means the permit granted under this regulation to workman.
 - j) "SCC" means the supervisor certificate of competency granted under this regulation to supervisors.
 - k) "Learner Permit" means a permit issued to a person to work under direct guidance of a person having appropriate category of supervisory certificate of competency for the purpose of learning.
 - l) "MV" means the voltage class not exceeding 650 Volt.
 - m) "HT" means the voltage class not exceeding 33 KV.
 - n) "EHT" means the voltage class exceeding 33 KV.
 - o) "Prescribed fees" the Govt. may notify the fee for issue / renewal etc for license SCC / Permit from time to time.
 - p) All other words and expressions used in this regulation and not defined shall have the meanings respectively assigned in the Electricity Act-2003 and Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation-2010.
3. (A) A board shall be constituted as Electrical License Board, Odisha (ELBO) to exercise such functions & perform such duties as assigned to it under this regulation.
- (B) The Board shall be constituted by Govt. of Odisha consisting of following members namely:-
- (1) E.I.C (Elec)-Cum-PCEI (O), (Ex-Officio) : Chairman.
 - (2) Electrical Inspector (Hq.) & Secretary,
E.L.B.O. (Ex-Officio) : Member, Secretary
 - (3) Chief Engineer (Testing, Calibration & Licensing) or
CEI (T&D), Odisha, Bhubaneswar (Ex-Officio) : Member
 - (4) Joint Apprenticeship Advisor O/O-Director
of Technical Education & Training, Odisha,
Cuttack (Ex-Officio) : Member.
 - (5) C.G.M. (Construction) OPTCL,
Bhubaneswar (Ex-Officio) : Member.

- (6) Deputy Director of Mines, Safety (Ele.)
Govt. of India, S.E. Zone, Ranchi (Ex-Officio) : Member.
- (7) A Representative of all Odisha Electrical
Contractors Association
(Having criteria mentioned below) : Member.
- (8) A Representative of Distribution Licensee
having Degree in Electrical Engg. & working
not below the rank of General Manager (O&M) : Member.
- (9) A Representative of Large Industrial
Organizations (Having criteria mentioned below) : Member.

Criteria For:-

(a) ***Member from Electrical Contractors Association:-***

- (i) Degree in Electrical Engineering or equivalent, and
- (ii) Possession of HT Contractor License from Electrical License Board, Odisha for a minimum period of 15 years.

(b) ***Member from Large Industries of Odisha:-***

- (i) Degree in Electrical Engineering, and
- (ii) Twenty years electrical engineering working experience in Large Industries.

4. **TERMS OF OFFICE:-**

A member of the Board other than Ex-Officio member of the Board shall hold office for a term of three years from the date of his appointment or such period as the State Government may direct.

5. **FILLING OF VACANCIES AND POWER TO FUNCTION NOT WITHSTANDING VACANCIES:-**

- (a) Filling of vacancies of members:- If a Member of the Board other than an Ex-Officio member remain absent in consecutive three meetings or express an unwillingness to continue, another member may be appointed in his place for a term of three years or such period as Govt. may direct.
- (b) The Board shall have power to act notwithstanding any vacancy in its Membership.

6. **FUNCTION OF THE BOARD:-**

- (i) To grant and cancel of licenses to Electrical Contractors who satisfies the conditions stipulated in this regulation.
- (ii) To grant and cancel Certificates of Competency to Supervisors and permits to Electrical Workman who satisfies the conditions contemplated in this regulation and also ratify the SCC and Permits approved by Chairman provisionally in the exemption cases as per regulation No.11(iv).
- (iii) To conduct examination for Supervisor and Electrical Workman.
- (iv) To grant and cancel of temporary contractor license and contractor license who satisfies the condition stipulated in this regulation and also to ratify the provisional licenses approved by Chairman.
- (v) To advise the State Government regarding all matters related to issue of licenses, certificates or permits. In case of any changes / amendments required in the licensing procedure / criteria, Board may recommend the same to Govt. for consideration and incorporation in the license regulation through proper notification by Govt.
- (vi) To decide on the violation of any of the provision of these regulations on the part of Electrical Contractors, Permit holders and Supervisors as per Regulation No.32 & 33 based on the enquiry.

7. **MEETINGS OF THE BOARD:-** The Board shall meet once in six months and at such other time as may be required in the opinion of the Chairman for transacting business, which can not be disposed of by circulation of papers. At least seven days prior notice of all meetings shall be sent to each Member.

8. **APPOINTMENT OF SUB-COMMITTEE:-** The Board shall have power to appoint sub-committees or nominate a person and delegate such of its powers and function to these sub-committees or a person as the Board may consider appropriate.

9. **QUORUM:-** Any five Members shall form the quorum at any meeting. It shall however be necessary for either the Chairman or the Secretary to be one of these five members present to enable the meeting to be held.

10. **CHAIRMAN OF THE MEETING:-** The Chairman or in his absence, one of the members present in that meeting may be elected as the Chairman of the meeting and shall exercise his voting power in case of the equality of votes.

11. **FUNCTION OF THE CHAIRMAN:-**

- (i) To preside over all the meetings of the Board unless deprived of attending any meeting due to unavoidable circumstances.
- (ii) To approve the list of examiners to be appointed for conducting the different examinations/tests to be held under these regulations for grant of Supervisor Certificate of Competency and Workman Permit.
- (iii) To grant temporary contractor license / contractor license provisionally pending ratification by the Board.
- (iv) Endorsement of outside contractor license / supervisor license issued by other State Licensing Board pending ratification by the Board.
- (v) To grant the Supervisor Certificate of Competency and Workman Permit for exemption cases pending ratification by the board.
- (vi) To grant the contractor license in case of contractor applies to remain in lower class when he fails to maintain required qualifying Workman or Supervisor.
- (vii) To grant for renewal of SCC after verification of Medical Certificate furnished by the supervisors.
- (viii) To grant duplicate license, SCC & Permit.
- (ix) Enquire or to arrange to enquire into violation of any of the provision of these rules on the part of Electrical Contractors, Supervisors & Workman Permit holders and to initiate appropriate action as decided by the Board.
- (x) To approve all expenditure relating to conduct of examination of workman / Supervisors and related meetings.

12 (A) **FUNCTION OF THE SECRETARY:-**

- (i) To take all actions as required and considered necessary in connection with Board's meetings, recording the proceedings of the meetings and all correspondences in accordance with the decisions of the Board.
- (ii) To notify the dates of examinations, scrutinize applications received, fix up programme for the examinations at various centers and take all such

actions as is considered necessary for holding the examinations and processing the results.

- (iii) To scrutinize all exemption cases claimed from appearing in the examinations and put up to the Board for their consideration.
- (iv) To scrutinize all applications received for grant of electrical contractors licenses and put up to the board for their consideration.
- (v) To issue licenses / certificates of competency / permits on the basis of the decisions of the licensing Board and make all correspondences as is necessary in this connection.
- (vi) To renew licenses / certificates of competency / Workman Permits as required.
- (vii) To issue duplicate licenses / certificates of competency, Workman Permits as required.
- (viii) To take action as required in connection with complaints and allegations made against holder of licenses / certificates of competency / Workman Permits as per licensing regulation.
- (ix) To maintain the registers of contractors/supervisors and workman to whom licenses, certificates of competency and permits have been issued by the Board.
- (x) To issue of Supervisor Certificate of Competency and Workman Permit on exemption basis after grant by Chairman.
- (xi) To conduct the EHT Workman Permit examination.
- (xii) To do all other things directed by the Chairman or the Board.

(B) **DELEGATION OF FUNCTION OF SECRETARY:-**

On behalf of the ELBO the Electrical Inspector of concerned Zone shall discharge the following functions in their respective jurisdictions:-

- (i) To scrutinize all the applications received for issue of Workman Permits/ Renewal of Workman Permits up-to HT work.
- (ii) To conduct the examination, after it is notified centrally by the Secretary fixing the programme for the examination at various centers and to take all such actions as considered necessary for holding the examination and submit the results to the Secretary for obtaining approval of electrical licensing board.

- (iii) To issue new permits on the basis of the approval of the Electrical Licensing Board, Odisha and make all correspondences as necessary in this connection.
 - (iv) To renew Workman Permits of candidates in their respective jurisdiction.
 - (v) To issue duplicate Workman Permit as and when required.
 - (vi) To take action as required in connection with complaints and allegation made against the holders of Workman Permit as per this Regulation.
 - (vii) To maintain register of Workman to whom permits have been issued by the Board.
- (C) Notwithstanding anything contained in Regulation- 12 (B), Secretary as and when required may delegate or withdraw any functions with the approval of the Chairman.

13. **EXAMINATION:** -

- (i) The Examinations shall be held at least once a year for grant of (a) Supervisor Certificate of Competency (b) Permits to Electrical Workmen. The periodicity of holding these examinations shall be decided by the Board from time to time.
- (ii) Examinations under these regulations shall be held at such places and on such dates as may be notified by the Secretary from time to time in the Odisha Gazette, and local news papers.
- (iii) Every examination shall be of such a nature as to test the practical knowledge of the candidates, to ascertain their competency and the adequacy of their practical experience to the satisfaction of the Board.
- (iv) Every examination shall be conducted at a place where the candidate's knowledge can be practically examined.

(v) **Examiners:-**

- (a) The Secretary with the approval of the Chairman shall appoint local examiners for the purpose of conducting examinations at different centers. A representative of the Directorate of Mines, Government of India shall be included in the list of Examiners for issuing Certificate of Competency in respect of installations in Mines.

(b) The examiners so appointed shall receive such honorarium as approved by the Government from time to time.

(vi) On notification for examination, interested candidates for applying the Supervisor Certificate of Competency and Workman Permit examination shall make an application in the prescribed format to Secretary, ELBO / Electrical Inspector of concerned Zone within the dates notified for the receipt together with,

- (a) Conduct Certificate (From a gazetted officer)
- (b) Practical Experience as required in different category with self attestation.
- (c) Xerox copy of Educational & Technical qualifications with self attestation.
- (d) Xerox copy of proof of date of birth with self attestation.
- (e) Xerox copy of Identity proof such as Voter ID card / PAN card / Driving Licenses / Aadhar card / Passport with self attestation.
- (f) Xerox copy of address proof such as Telephone Bill / Electricity Bill / Bank Pass Book / Gas Card / any other proof in support of address with self attestation.
- (g) 3 (three) nos. of recent passport size colour photograph with white background.
- (h) 3 (three) nos. specimen signature.
- (i) Original treasury chalan in support of payment of the fees (non-refundable) for the examination.

14. **WORKMAN PERMIT EXAMINATION SHALL BE CONDUCTED FOR ISSUING WORKMAN PERMIT INTENDED TO WORK FOR THE FOLLOWING CATEGORIES:-**

<u>CATEGORY</u>	<u>PERMITTED TO WORK</u>
i) Electrical Workman-MV :	
a) Wireman-MV : (with Learner permit for Lineman-MV)	Domestic & Industrial Installations with Under Ground installation including equipment upto 650V.
b) Lineman-MV : (with Learner permit for Workman-HT)	Overhead & Under Ground installation including equipment upto 650V.

ii) Electrical Workman-HT : (with Learner permit for Workman-EHT)	Overhead / underground installations & equipments upto 33KV including Under ground.
iii) Electrical Workman-EHT:	All overhead and under ground electrical installations work and also installation of electrical equipment of all voltage class.
iv) Endorsement for cable: Jointing.	11 KV or 33 KV. (For this purpose a practical test in cable jointing work will be necessary).
v) Endorsement for Mining for each Category.	For this purpose it will be necessary to test the candidate's knowledge of the safety rules for working in mines.

All these examinations shall be conducted through viva-voce and the syllabus shall be as per Annexure-I. The syllabus may be amended from time to time as may be considered necessary by the Board.

A candidate must secure a minimum of 20 marks in the practical and oral test out of 50 marks for being declared to have passed the examination for issue of permits.

15. **QUALIFICATION FOR WORKMAN PERMIT EXAMINATION:-**

(A) Candidates for the examination of "WIREMAN-MV PERMIT" (with Learner permit for Lineman-MV) shall be a person-

(i) Who has passed minimum **Class-VII** and has been trained in electrical works at least two years under a person possessing a valid Supervisor Certificate of Competency granted by the Board. The experience certificate should be signed by the Licensed Contractor and Supervisor (MV/HT/EHT) describing the nature of work.

Persons working in industry, registered under Factory Act 1948 and having connected load more than 250 KW shall obtain experience certificate from Supervisor having valid SCC of Govt. of Odisha duly counter signed by the employer.

(ii) Who has worked for at least for two years as helper assisting the workman (Wireman) under the Supervision of an electrical engineer of Odisha Government, Odisha Govt. undertaking and Distribution Licensees.

The experience certificate shall be obtained from the Higher Technical Authority (not below the rank of Executive Engineer / Manager) describing the nature of work (*this provision is extended for one year only from the date of notification of this regulation*).

(iii) Who has successfully passed the course prescribed for Electrical Wireman Trade/Electrician Trade from a recognized Industrial Training Institute of the State or any equivalent examination (approved by NCVT) is exempted for examination.

(B) Candidate for the examination of "LINEMAN-MV PERMIT" (with learner permit for Workman-HT) shall be a person:-

(i) Having learner Lineman-MV permit and has been trained in MV works at least for two (02) years under a person possessing a valid Supervisor Certificate of Competency granted by the Board. The experience certificate should be signed by the Licensed Contractor and Supervisor (MV/HT/EHT) describing the nature of work.

Persons working in industry, registered under Factory Act 1948 and having connected load more than 250 KW shall obtain experience certificate from Supervisor having valid SCC of Govt. of Odisha duly counter signed by the employer.

(ii) Who has worked for at least for three (03) years as helper assisting the lineman under the supervision of an electrical engineer of Odisha Government, Odisha Govt. undertaking and Distribution Licensees. The experience certificate shall be obtained from the Higher Technical Authority (not below the rank of Executive Engineer / Manager) describing the nature of work (*this provision is extended for one year only from the date of notification of this regulation*).

(iii) Who has successfully passed ITI course prescribed for Electrician trade from a recognized Industrial Training Institute of the State or any equivalent examination (approved by NCVT) is exempted from appearing examination.

(iv) Who has successfully passed ITI Wireman trade from a recognized Industrial Training Institute of the State or any equivalent examination (approved by NCVT) having two year apprentices training as Lineman is exempted from appearing examination.

(C) Candidate for the examination of "WORKMAN-HT PERMIT" (with Learner permit for Workman-EHT) shall be a person:-

(i) Having learner Workman-HT permit and has been trained in HT works at least for two years under a person possessing a valid Supervisor Certificate of Competency granted by the Board. The experience certificate should be signed by the Licensed Contractor and Supervisor (HT/EHT) describing the nature of work.

Persons working in industry, registered under Factory Act 1948 and having connected load more than 250 KW shall obtain experience certificate from Supervisor having valid SCC of Govt. of Odisha duly counter signed by the employer.

(ii) Having learner Workman-HT permit and worked for at least two years HT works assisting the lineman under the supervision of an electrical engineer of Odisha Government, Odisha Govt. undertaking and Distribution Licensees. The experience certificate shall be obtained from the Higher Technical Authority (not below the rank of Executive Engineer / Manager) describing the nature of work.

(iii) Having ITI Electricians Trade employed by OPTCL and successfully completed one year training under OPTCL training centre are exempted from appearing examination on completion of one year experience after training. The experience certificate shall be obtained from the Higher Technical Authority (not below the rank of Executive Engineer / Manager) describing the nature of work which should be counter signed by CGM (O&M), OPTCL. The Xerox copy of the training certificate is mandatory.

(D) **Candidate for the examination for “WORKMAN-EHT PERMIT” shall be a person:-**

(i) With ITI Electrician trade having learner Workman-EHT permit and has assisted in EHT works at least for three years under a person possessing a valid Supervisor Certificate of Competency granted by the Board. The experience certificate shall be obtained from the Higher Technical Authority (not below the rank of Executive Engineer / Manager) describing the nature of work. In case of persons working under the contractor the experience certificate shall be obtained describing the nature of work and signed by the contractor & EHT supervisor.

(ii) Having learner Workman-EHT permit and employed by OPTCL successfully completed one year training under OPTCL training centre and has been trained in EHT works at least for five years after training, under a person possessing a valid Supervisor Certificate of Competency granted by the Board. The experience certificate describing the nature of work shall be obtained from higher technical authority not below the rank of Executive engineer / Manager describing the nature of work and recommended by OPTCL higher authority (not below the rank of General Manager).

(iii) With ITI Electricians trade employed by OPTCL having learner Workman-EHT permit successfully completed two years experience. The experience certificate shall be obtained from the Higher Technical Authority (not below the rank of Executive Engineer / Manager) describing the nature of work which should be counter signed by CGM (O&M), OPTCL.

16. **MINIMUM AGE FOR OBTAINING PERMIT:**

A candidate for the examination for Workman Permit shall be a person not below the age of **20 (twenty)** years on the date of application to appear in the examination.

17. **GRANT OF WORKMAN PERMIT:-**

- (i) Workman permit in Form-“F” shall be granted by the board to every successful candidate who passed the examination for electrical Workman Permit.

(ii) The board may also grant to any person who qualifies as per the regulation -15(A)(iii), 15(B)(iii) & (iv) and 15(C)(iii).

(iii) ELBO shall also recognize the workman permit issued by other States Licensing Board under regulation 29 (1) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation – 2010 with which Govt. of Odisha have reciprocal arrangements and issue equivalent appropriate category of permit after verification.

18. **CONVERSION OF PERMIT:-**

Since the existing 6 categories of workman permits has been restructured into four categories only, the existing permit holder of different categories will be brought over to new permit categories as mentioned below.

Existing Categories	Converted Categories
i) Wireman – C	Wireman-MV (with Learner permit for Lineman-MV)
ii) Wireman – B	
i) Wireman – A	Lineman-MV (with Learner permit for Workman-HT)
ii) Lineman – C	
i) Lineman – B	Workman-HT (with learner permit for Workman-EHT)
ii) Lineman – A	

After conversion of new categories brought into effect, the experiences thereafter will be considered for further up-gradation and endorsement.

19. **EXAMINATION FOR SUPERVISOR CERTIFICATE OF COMPETENCY:-**

The examination for Supervisor Certificate of Competency is intended for a person who directly supervises Electrical Installation work.

(a) The examination for Supervisor Certificate of Competency shall be comprised of written paper and oral test for MV & HT. The examination question papers shall be set in English and the candidates are required to answer in English normally. However the board may permit a candidate to answer in Odia. The Viva-Voce test can be taken either in English / Odia / Hindi for the convenience of the candidate.

It is also necessary for candidates to be well conversant with the I.E. Rules / Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation-2010 for the installations in addition to knowledge on technical standards and specification.

- (b) The syllabus for the written and oral test shall be the common syllabus as per Annexure –II, III & IV. The syllabus may be added to or amended from time to time as may be considered by the board or CEA guidelines.
- (c) A candidate must secure a minimum 50 marks out of 100 in written paper to appear for practical and oral tests. Minimum 50 marks out of 100 is again to be secured in oral tests for being declared to have passed the examination for issue of certificate of competency in case of MV & HT.

20. **QUALIFICATION FOR SCC EXAMINATIONS:-**

(A) For Supervisor Certificate of Competency (SCC-MV):-

Candidates for examination of Supervisor Certificate of Competency (General or Mining) must comply with Regulation-13(vi) of this regulation and must have passed Degree in Electrical Engineering or Diploma in Electrical engineering having 02 (two) years working experience or Electrician Trade from an ITI with 05 (five) years experience or +2 Science having valid Workman Permit with 06 (six) years experience in electrical installation work (The candidates having +2 Science qualification will be allowed for one year from the date of issue of Regulation). For this purpose a certificate of experience describing the nature of work is to be furnished from a SCC (MV) holder and to be counter signed by the contractor. In the case of a person working under industry the certificate is to be counter signed by the employer.

(B) For Supervisor Certificate of Competency (SCC-HT):-

Candidates for examination of SCC (HT) must have in possession of SCC (MV) with knowledge and experience (of at least two years for Degree Electrical Engineers and three years for Diploma Electrical Engineers) about HT installations towards inspections, design, testing and commissioning, construction, operation and maintenance. For this purpose

a certificate of experience about his knowledge is to be furnished from a SCC (HT / EHT) holder. In the case of a person working under industry the certificate is to be counter signed by the employer.

21. **MINIMUM AGE FOR OBTAINING SUPERVISOR CERTIFICATE OF COMPETENCY (SCC):**

A candidate for the examination / exemption for Supervisor Certificate of Competency shall be a person not below the age of 23 (twenty three) years on the date of application.

22. **GRANT OF SUPERVISOR CERTIFICATE OF COMPETENCY (MV):-**

- (i) Supervisor Certificate of Competency (SCC-MV) in Form-“C” shall be granted by the board to a candidate on receipt of application in prescribed format with a chalan in support of payment of the prescribed fees (non-refundable) subject to ;
 - (a) Who has passed the examination for Supervisor Certificate of Competency held by the (Electrical Licensing) Board in accordance with Regulation-19.
 - (b) Who has obtained a similar certificate of competency from any other electrical licensing board who have adopted the common syllabus and with whom the State Government have reciprocal arrangements in this respect.
- (ii) **The board may also grant SCC (MV) to a person on exemption from appearing examination:-**

Who has obtained a Diploma or Degree in Electrical Engineering from any Engineering School, College or Institution recognized by the State Government and who has working experience for at least three years in case of Diploma holder and two years in case of Degree holder either in Government of Odisha / in any fully owned Govt. of Odisha Undertaking / OHPC / OPTCL / GRIDCO / OPGC and Distribution Licensees, Central Govt., Central Public Sector Undertaking (CPSU) and Private industries registered under factory Act-1948 in the state of Odisha. The experience certificate shall be obtained from the higher Technical Authority (not below the rank of Superintending Engineer / General Manager) describing the nature of work. This SCC (MV) granted under this regulation however can be utilized only for the organization he is serving during his period of service and can not supervise and give certificate for such supervision for any other work not belonging to his respective employment.

23. **GRANT OF SUPERVISOR CERTIFICATE OF COMPETENCY (HT):-**

- (i) Supervisor Certificate of Competency shall be endorsed in Form- 'C' to a candidate on receipt of application in prescribed format with a chalan in support of payment of the prescribed fees (non-refundable) subject to ;
 - (a) Who has passed the examination for SCC (HT) in accordance to Regulation-19.
 - (b) Who has obtained a similar certificate of competency from any other electrical licensing board who have adopted the common syllabus and with whom the State Government have reciprocal arrangements in this respect.
- (ii) **The board may also grant SCC (HT) to a person on exemption from appearing examination:-**

Who has obtained a Diploma/Degree in Electrical Engineering & directly working under Govt. of Odisha / OHPC / OPGC / OPTCL / GRIDCO / Central Govt. / in any fully owned Govt. of Odisha undertaking / Distribution Licensee / Central Public Sector Undertaking / Private industries registered under Factory Act 1948 operating in the State of Odisha having at least 10 (Ten) years in service out of which 5 (Five) years for Degree Engineers and 7 (Seven) years for Diploma Engineers spent in the field of construction/ Repair / Maintenance / Testing / Inspection / Commissioning of HT works. The experience certificate shall be obtained from the Higher Technical Authority (not below the rank of Superintending Engineer / General Manager) describing the nature of work. The SCC (HT) granted under this regulation, however can be utilized only for the organization he is serving during his period of service and can not supervise and give certificate for such supervision for any other work not belonging to his respective employment.

24. **GRANT OF SUPERVISOR CERTIFICATE OF COMPETENCY (EHT):-**

Supervisor Certificate of Competency shall be endorsed in Form- 'C' to a candidate on receipt of application in prescribed format subject to;

- (a) Who has obtained a Degree in Electrical Engineering or equivalent and in possession of SCC (HT) with knowledge and experience of at least 7 (seven) years in EHT installations on design, testing, commissioning,

construction, inspection, operation and maintenance. For this purpose a certificate of experience about his knowledge is to be furnished from the higher technical authority (not below the rank of Superintending Engineer / General Manager) describing the nature of work in case if employed in Govt. of Odisha / OPTCL / OHPC / OPGC / Central Govt. & Central Public Sector undertakings / Large Industries Operating in Odisha registered under Factory Act-1948 utilizing power supply above 33 KV. In case of private industries Operating in Odisha registered under Factory Act-1948 the experience certificate should be counter signed by the employer.

25. **GRANT OF ELECTRICAL CONTRACTOR'S LICENSE:** An Electrical Contractor License shall be granted in Form-'D' only to a person (or a Firm) approved by the Board, who satisfies the conditions laid down below
- (a) The applicant must be a citizen of India.
 - (b) The applicant must have attained the age of **18 (Eighteen)** years as on the date of application and has passed **10th (Tenth)** standard examination.
 - (c) If the license is sought for a partnership firm, the firm must have submitted partnership deed or if the License is sought for a registered company, the same must have been registered with the Registrar of Companies. In case of a partnership firm all the partners of the firm and in case of a registered company not less TWO THIRD of total number of Directors may resolve and issue an authorization letter to the authorized signatory to sign the application on behalf of the firm or company as the case may be. The Authorization letter shall be on Rs.100/- stamp paper.
 - (d) The applicant shall not be an employee of a State or Central Government or Public Sector undertaking.
 - (e) Where an applicant either as proprietor or partner of a firm or Director of a company is found to have been penalized as per the provision of regulation 33, he shall not be eligible for grant of another license either as a proprietor or as a partner or as a Director as the case may be.

26. **ISSUE OF LICENSE TO ELECTRICAL CONTRACTORS:** An application for a contractor license shall be made to the Secretary, E.L.B.O., Bhubaneswar in prescribed format with a chalan in support of payment of the prescribed fees (non-refundable).

Every Application form for Contractor License shall be accompanied by the followings:-

- (a) Original Treasury challan for having remitted the requisite fee.
- (b) Specimen signature and three recent passport size colour photographs with white background showing the complete face of the applicant. The photograph shall be self attested at the back side.
- (c) Photocopy of PAN card with self attestation.
- (d) Any of the photo identity proof of the applicant such as Passport, Voter identity card, driving license, PAN card & Aadhar card with self attestation.
- (e) Proof of address of business such as Telephone bill / Electricity bill / Bank passbook with self attestation or an affidavit sworn before the Notary.
- (f) If the license is sought for a partnership firm, a copy of registered partnership deed and if the license is sought for a registered company, copy of Memorandum and Articles of Association approved by the Registrar of Companies and authorization letter in original issued to the authorized signatory by the partnership firm or company as the case may be;
- (g) Copies of the appointment letter of Supervisors & Workman signed by the contractor with date.
- (h) Willingness letter obtained from Supervisor, Workman with their full signature with date along with the original Permit and SCC.
- (i) Affidavit from the Workman & Supervisor indicating they are the sole employment of the contractor to be furnished individually.
- (j) Affidavit from the contractor indicating the name of workman / supervisor with their permit and license number indicating all the workman & supervisors are working under his establishment.
- (k) Proof of execution of work done including adherence to the quality in case of EHT contractor as stipulated as the provision in this regulation.

- (l) Copies of educational qualification along with proof of age with self attestation.
- (m) Undertaking regarding possession of the instruments and T&P as per regulation.
- (n) Undertaking to engage at least 50% full time Workman possessing appropriate permits issued by ELBO.
- (o) Verification certificate of Workman & Supervisor under his sole employment.

26 (A) Issue of MV Contractor License:-

- (a) He shall either himself hold a Supervisor Certificate of Competency and personally execute and supervise all works undertaken by him OR have at least one whole-time supervisor holding a Supervisor Certificate of Competency (MV) in his employment for the supervision of works undertaken by him.
- (b) Should have in his full time employment of minimum
 - (i) 1 (one) Wireman MV.
 - (ii) 1 (one) Lineman MV.
- (c) He should submit an undertaking to engage at least 50% full time workman possessing appropriate permits issued by ELBO for the execution of works undertaken by him.
- (d) He shall always maintain the following testing instruments in good working condition, duly calibrated for carrying out the tests required under the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation-2010 and shall present them whenever required to do so for checking and inspection by any officer of the Electrical Inspectorate Govt. of Odisha.
 - One Insulation Tester – 500 volt class.
 - One Earth Tester with accessories
 - Tongue tester.
 - Hand drilling machine.
 - Multi-meter
 - Phase sequence indicator.

- Hand rubber Gloves tested as per ISS4770 (not to be used beyond three years of manufacture).

He should submit an undertaking regarding possession of the above instruments and T&P during application and renewal.

- (e) He should maintain appropriate establishment to conduct his business and furnish an undertaking to that effect.

26. (B) Issue of HT Contractor License:-

- (i) The applicant:-

- (a) He shall either himself hold a HT Supervisor Certificate of Competency and personally execute and supervise all works undertaken by him OR have at least one whole-time supervisor holding a Supervisor Certificate of Competency (HT) in his employment for the supervision of works undertaken by him.

- (b) Should have in his full time employment of minimum

- (i) 1 (one) Workman HT.
- (ii) 1 (one) Lineman MV.
- (iii) 1 (one) Wireman MV.

- (c) He should submit an undertaking to engage at least 50% full time Workman possessing appropriate permits issued by ELBO for the execution of works undertaken by him.

- (d) He shall always maintain the following testing instruments in good working condition duly calibrated for carrying out the tests required under the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation-2010 and shall present them whenever required to do so for checking and inspection by any officer of the Electrical Inspectorate Govt. of Odisha.

- One Insulation Tester – 500V & 1000V / 2.5KV / 5KV Class
- Live Line Tester (One for each Workman)
- Multi-meter
- Phase sequence indicator
- Tongue tester.
- Hand drilling machine.
- One Earth Tester with accessories

- Lead Lift with different type pulley.
- Hand operated and hydraulic crimping tool.
- Pedestal drilling machine
- Tree cutting power saw.
- Discharge Rod.
- Hand Rubber gloves tested as per ISS4770 (not to be used beyond three years of manufacture).

He should submit an undertaking regarding possession of the above instruments and T&P during application and renewal.

- (e) He should maintain appropriate establishment to conduct his business and furnish an undertaking to that effect.

(C) Issue of HT Contractor License endorsement with cable jointing:-

In the event where H.T. Contractor desires to take up H.T. Cable laying/jointing works, he shall have in full time employment a workman with endorsement for H.T. cable Jointing and shall have his H.T. License endorsed for H.T. cable jointing indicating the voltage upto which the cable jointing is endorsed (i.e. up to 11KV or 33KV).

(D) Issue of EHT Contractor License:-

- (i) The applicant:-
 - (a) Shall have a valid H.T contractor license for a minimum continuous period of three years and must have executed the installation and commissioning work of not less than 5 (five) number of H.T electrical installation works or EHT work having temporary project license in last three years. Proof of such execution of works including adherence to the quality shall be furnished to the satisfaction of the Board.
 - (b) He shall either himself hold a Supervisor Certificate of Competency (E.H.T) & personally execute and supervise all works undertaken by him OR have at least one whole-time supervisor holding a Supervisor Certificate of Competency (E.H.T) in his employment for direct supervision of works undertaken by him.

(c) Should have in his full time employment of minimum

- (i) 2 (two) Workman E.H.T.
- (ii) 2 (two) Workman HT.
- (iii) 1 (one) Wireman MV.

(d) He should submit an undertaking to engage at least 50% full-time workman possessing appropriate permits issued by ELBO for the execution of works undertaken by him.

(e) He shall always maintain at least the following testing instruments and equipments in good working condition duly calibrated for carrying out the tests required under the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation-2010 and shall present them whenever required to do so for checking and inspection by any officer of the Electrical Inspectorate Govt. of Odisha.

- One 5KV Motorized Insulation Tester
- One 1000V Insulation Tester
- One Earth Tester with Accessories
- Tong Tester
- Two Digital Multi-meters
- Two Hydraulic Compressor / Motorized Compressor
- Four sets Lead Lift with different types of Pulley
- Theodolite.
- Rubber Hand Glove tested as per ISS4770 (not to be used beyond three years of manufacture).
- Safety Belt.
- Hand operated and hydraulic crimping tool.
- Single phase welding generator.
- Gas cutting set.
- Pedestal Drilling machine.
- Vibrator
- Camalong clamp for different conductor and earth wire.
- Discharge Rod.

He should submit an undertaking regarding possession of the above instruments and T&P during application and renewal.

- (f) He should maintain appropriate establishment to conduct his business and furnish an undertaking to that effect.

27 A. ISSUE OF TEMPORARY CONTRACTOR LICENSE FOR A SPECIFIC PURPOSE:

Subject to fulfillment of the conditions as laid down in Regulation 26 a temporary contractor license is issued for specific project, specific period and for specific purpose to a person/firm not possessing requisite contractor license issued by ELBO to take up the project.

An application in the prescribed format alongwith a copy of the work order, and chalan for the prescribed fee (non-refundable) may be made to the Secretary ELBO.

If the Chairman is satisfied about the need, the temporary contractor license shall be granted provisionally pending ratification by Board. The conditions based on which permanent licenses are issued for the various categories of work as laid down in Regulation- 25 & 26 of this regulation, are met for corresponding types of work for which temporary license is required. Such a license shall be issued for a period of one year or the completion time as mentioned in the work order whichever is earlier. This may be extended to a maximum period of five years or the contract period which ever is lower with required fees.

For issue of temporary contractor license verifications of workman & supervisor are required.

On receipt of application if there is no objection / correspondence regarding defects then after one month from the date of receipt it is will be presumed that documents are correct and license is to be issued.

27 B. ENDORSEMENT OF OUTSIDE CONTRACTOR LICENSE ISSUED BY OTHER STATE LICENSING BOARD:-

The contractor having Electrical Contractor license issued by licensing board of other States will be allowed to take up the work in the state of Odisha through endorsement subject to fulfillment of following conditions

- (i) Needs verification of authenticity of license of the Contractor, Workman Permit of workman and Supervisor Certificate Competency of supervisor working under the contractor for which:-
 - (a) He should submit one self declaration regarding the authenticity of license / SCC / permit issued by other State.
 - (b) The affidavit to the correctness of all the documents submitted are to be furnished.
 - (c) The experience certificate / qualification of the supervisor & permit holder are to be submitted by the contractor and the persons are to be personally verified along with their license book issued by other State by ELBO.
 - (d) Adjustment of appropriate category of workman according to this regulation verifying their experience is to be approved by the Chairman for the workman permits issued by other States.
- (ii) The Contractor is to abide to all other stipulation laid down in this regulation.

27 C. ENDORSEMENT OF OUTSIDE SUPERVISOR CERTIFICATE OF COMPETENCY (SCC) ISSUED BY OTHER STATE LICENSING BOARD:-

The supervisor having SCC issued by licensing board of other States will be allowed to take up the work in the state of Odisha through endorsement subject to fulfillment of following conditions

- (i) Needs verification of authenticity of SCC issued by other licensing board for which:-
 - (a) He should submit one self declaration regarding the authenticity of SCC issued by other State.
 - (b) The affidavit to the correctness of all the documents submitted are to be furnished.
 - (c) The experience certificate / qualification of the supervisor is to be submitted and the persons is to be personally verified along with their license book issued by other State by ELBO.
- (ii) The Supervisor is to abide to all other stipulation laid down in this regulation.

28. VALIDITY AND RENEWALS OF PERMITS, CERTIFICATES OF COMPETENCY AND ELECTRICAL CONTRACTOR'S LICENSES:-

- (i) The permits granted under these regulations shall be valid for a period of five years and shall be renewed periodically not exceeding 5 (Five) years at a time till attaining the age of 62 years on payment of non-refundable renewal fees as prescribed.
- (ii) Supervisor Competency Certificate granted under these regulations shall be valid for a period of 3 (three) years and shall be renewed periodically not exceeding 3 (three) years at a time till attaining the age of 60 (sixty) years on payment of non-refundable renewal fees as prescribed.

Provided that, grant or renewal of Supervisor Certificate of Competency to the applicant / Certificate holder after attaining the age of sixty years shall be issued for a period not exceeding 3 (three) years upto 70 years on production of physical fitness from a Govt. Medical Officer not below the rank of District Medical Officer / Chief District Medical Officer.

- (iii) The contractor license granted under these regulation shall be valid for a period of 03 (three) years and shall be renewed periodically not exceeding 03 (three) years on payment of nonrefundable renewal fees as prescribed and submission of continuation certificate by the staff with counter signature of the contractor. If there is any need for verification the contractor may be directed to verify all the staffs.
- (iv) The application for renewal in the prescribed format together with the permit, certificate of competency / contractor's license and the challans in support of the prescribed fees shall be submitted, 01 clear month before the expiry but not before 03 clear months.

Provided further that late renewal for permit, SCC and Contractor License may also be granted within a period of 12 (twelve) months from the date of expiry with prescribed penalty and invalidating the late period.

If the SCC & Permits are required to be issued after expiry of all grace period, then the SCC / Permit holder has to apply afresh for new SCC / Permit of their same category and it will be issued on qualifying in the examination.

If the contractor license is required to be issued after expiry of all the grace period (i.e. 12 (twelve) months from the date of expiry) the contractor has to apply afresh for new license.

29. **ISSUE OF DUPLICATE COPY OF PERMIT / CERTIFICATE OR LICENSE:-**

On being satisfied that an original Permit / Certificate or License granted under these regulations has been lost or destroyed, on application in the prescribed format the Secretary may grant a duplicate permit / certificate or license on payment of the fee prescribed for each category after submission of FIR copy along with an affidavit as per **Annexure –V** in case of lost and an affidavit from a Notary in case of destroyed, three specimen signature and three recent passport size colour photographs.

In case lost or destroyed, duplicate permit / certificate or license will be issued if applied latest before completion of one year of expiry.

30. **MAINTENANCE OF RECORDS:-** Separate registers shall be maintained for Workman Permits, Certificates of Competency, Contractors' License including temporary contractor license in which the dates of issue, renewals, endorsements and any other attributes shall be duly recorded.

31. **OBLIGATION OF LICENSED CONTRACTORS, SUPERVISORS AND ELECTRICAL WORKMAN:-**

(A) LICENSED CONTRACTORS:-

- (i) As per provision of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation-2010, no electrical installation works undertaken by the holder of a valid contractor license shall be carried out without the direct supervision of a person possessing a certificate of competency and at least fifty percent (50%) of the Electrical Workmen employed in any such work in possession of a valid permit. Both the supervisor and the workman should work full time for him.

After completion of such electrical installation work, a test / completion report shall be furnished by the contractor to the supplier/consumer/owner or occupier. The report shall be signed by the Supervisor under whose supervision the work has been carried out and

countersigned by the holder of the contractor's license who shall be wholly responsible for the proper execution of the work **(Signature of the Supervisor & Contractor should tally with the specimen signature given by them during issue of Licenses / Certificates from ELBO.)**

- (ii) Every licensed contractor shall maintain a register of all supervisors and workman employed by him. Proper record of the names of the supervisor and workman engaged in each work shall be maintained to ascertain designated persons.

Such register maintained under above obligation shall be produced before the Electrical Inspector or any person authorized by him on his behalf when required and if on inspection Electrical Inspector finds that the designated person(s) does/do not fulfill the required qualification, he shall recommended the removal of the name of such persons from the register under intimation to the ELBO.

- (iii) A quarterly return giving the details of works executed during a quarter, the supervisor and the electrical workman engaged in each work and such other information incidental to it shall be furnished to the Secy. ELBO in such form and within such time as may be prescribed for this purpose **(Annexure – VI).**

Return shall be filed online in the ELBO website within 15th day of the following month of each quarter (i.e. by 15th July, 15th Oct, 15th Jan and 15th April). Failing to file return for 03 (three) consecutive quarter will be considered to be deemed cancelled of the license. Any suppression of facts of the work undertaken will be considered as violation of ELBO Regulation.

- (iv) The holder of a contractor's license shall be either in possession of a valid supervisor certificate of competency or retain on his sole employment at least one supervisor holding a valid supervisor certificate of competency and the minimum number of Workman of different categories specified under Regulation-26, failing which the license shall be invalid. If within 3 (three) months of the license becoming so invalid and the license is not revalidated after fulfilling the required conditions, the license shall be deemed to have been cancelled.

- (v) License contractor may apply to endorse his license to a lower class of license when he fails to maintain the required qualifying workman and supervisor.
- (vi) The contractor shall maintain a register of the Workman / Supervisors engaged for each of the work undertaken by him. It should contain the Name, Address with Mobile number & Signature of the Workman / Supervisors along with date of work undertaken by them. The register should be produced at any time on demand by Secretary, ELBO or any Electrical Inspectors for verification.
- (vii) The Contractor shall have obligation to give 3 months prior notice to the Supervisor / Workman for terminating the contract of employment under intimation to E.L.B.O., Odisha, BBSR.
- (viii) If the holder of the license accepted an employment under any other firm or person shall surrender the license to the Secy. ELBO for cancellation.
- (ix) The holder of the license shall have in his possession the instruments and T&P specified in Regulation-26 for carrying out the different types of work undertaken by him.
- (x) The holder of the license shall intimate the Secretary in writing within the period specified below as to every change of the following for updating the data. Failing to adhere to the above instruction shall lead to cancellation of contractor license:-
- Address of the place of business within seven days of such change.
 - Proprietorship within seven days of such change (in case of death within one month).
 - Authorized representative or dissolution of partnership within seven days (in case of death within one month).
 - Mobile number within 7 (seven) days of such change.
- (xii) At the time of Disaster like situation (like Cyclone / Flood etc) the contractors have to discharge obligation for restoration of electricity supply. As & when Govt. directs, the contractors shall mobilize their manpower / machineries and other resources to undertake restoration work immediately.

(B) SUPERVISOR:-

- (i) Every person who holds a valid supervisor certificate of competency shall remain in the sole employment of one licensed contractor at any time and he shall report any change in employment within a week of such change to the Secretary.
- (ii) Persons who have been exempted from appearing in the examination and granted a certificate of competency by virtue of their departmental status shall be treated as supervisors only for the specific purpose. They shall not give certificate for supervision of any other installation work not covered under the scope of respective employment.
- (iii) The Supervisor shall have obligation to give 3 (three) months prior notice to the contractor for resigning from the employment under intimation to the E.L.B.O., Odisha, BBSR.

Further, he cannot rejoin in employment of same contractor in the next 06 (six) month.

- (iv) The Supervisor should be present at the time of inspection by the electrical inspector if asked for.
- (v) The holder of the SCC shall intimate the Secretary in writing within the period specified below as to every change of the following for updating the data. Failing to adhere to the above instruction shall lead to cancellation of Supervisor Certificate of Competency.

- Present Address of the Supervisor within seven days of such change.
- Mobile number within seven days of such change.

(C) WORKMAN:-

- (i) Persons holding valid workman permit in sole employment of any employer shall not work in installation not covered under the scope of his employment. Any change in employment shall be reported to the secretary within a week.
- (ii) The person having valid Workman Permit shall have obligation to give 3 (three) months prior notice to the contractor for resigning from the employment under intimation to the ELBO, Bhubaneswar.

Further, he cannot rejoin in employment of same contractor in the next 06 (six) month.

32. **UNAUTHORIZED ENTRIES, MUTILATIONS OR DEFACEMENTS OF THE LICENSE / CERTIFICATE / PERMITS:-**

Any mutilation or defacement or any unauthorized entry in any license / certificate / permit shall make the license / certificate / permit liable for cancellation by the Secretary. The decision of the Board in this respect shall be final if appeal is made within 30 (thirty) days of such cancellation. For the purpose of ascertaining whether there has been any mutilation or defacement or any unauthorized entry in any permit, certificate or license, the Secretary may require the production of the permit, certificate of competency or license as the case may be, before him for inspection and on such requisition, the license / certificate / permit holder is liable to produce it.

33. **MISCONDUCT OF LICENSED CONTRACTORS, SUPERVISORS AND ELECTRICAL WORKMAN:-**

(1) Whenever it appears any licensee or SCC holder or Permit holders:-

(a) Has violated any provisions of these rules;

(b) Has violated any of the terms and conditions of the license or SCC or Permit.

(c) Has played fraud or misrepresented to any authority, organization or to any person with regard to license or SCC or Permit either before or after obtaining the same.

(d) Has misbehaved with any officers or officials, or has been convicted by a court of law or black listed by any Govt. undertaking in relation to electrical works;

(e) Has violated any tender condition reported by the officer's of the State Govt. / Central Govt. & its undertaking.

(f) Is declared bankrupt or insolvent, by the appropriate authority or wound up dissolved, or portioned.

(g) Has wrongly represented to any authority with regard to the quality of electrical installation work carried out by him [if the electrical installation work has not been or is not being carried out in accordance with provision of CEA (Measures relating to safety and Electric Supply) Regulation-2010].

The Board may suspend license / SCC / permit, as the case may be pending enquiry in to alleged contravention of any of the rules/regulation for a period which may be upto the period of validity of license / SCC / Permit. Such an order may be passed by the Chairman if he is prima facie of the view that the licensee / SCC holder / Permit holder is guilty of an offence. The period of such suspension shall be ordinarily not exceeding 06 (six) months.

- (2) Where the license / SCC / Permit is suspended, the licensee / SCC holder / Permit holder shall not carry out any work until the suspension is revoked by a separate order as per the decision of the Board.
- (3) The Chairman may order for an enquiry by the officer of the Electrical Inspectorate not below the rank of Deputy Electrical Inspector and place before the Board the enquiry report. Based on the enquiry report the Board may cancel the license / SCC / Permit for a minimum period of THREE years or revoke the suspension. Further, to revoke such suspension of license / SCC / Permit, he shall make a representation to the Board enclosing the order of the Board / Chairman.

Provided that, no license or SCC or Permit shall be cancelled, except after giving the licensee / SCC holder / Permit holder, an opportunity of making representations.

- (4) Where the license / SCC or Permit is cancelled, the licensee / SCC holder / Permit holder shall not be eligible to carry out any work until the cancellation is revoked by a separate order as per the decision of the Govt. or the Board.
- (5) Further, to revoke such cancelled license or SCC or Permit, he shall make a representation to the Board enclosing the order of the Govt. or the Board. The Board may revoke the cancelled license or SCC or Permit.

34. **APPEALS:-**

- (1) Any person aggrieved by the order of the Board, may appeal to the Secretary, Department of Energy, Government of Odisha within a period of thirty days from the date of receipt of the order by him.
- (2) The order of the Government shall be final.

35. **“Annexure – I”** Syllabus for Electrical Workman Permit.

“Annexure – II” Syllabus for Electrical Supervisor Certificate of Competency (SCC – MV).

“Annexure – III” Syllabus for Electrical Supervisor Certificate of Competency (SCC – HT).

“Annexure – IV” Syllabus for Electrical Supervisor Certificate of Competency (SCC – EHT).

“Annexure – V” For Duplicate License / SCC / Permit.

“Annexure – VI” Return Form for Electrical Contractor.

This notification supercedes earlier notifications issued on Electrical Licensing Board Odisha (ELBO) Regulation in this Department.

By order of Governor

Sd/-

(S.C. Mohapatra)

Principal Secretary to Govt.

Memo No. **9554** /Dated, the **03.12.2014**

Copy forwarded to All Departments of Govt. / All Heads of Department for information and necessary action.

Sd/-

Addl. Secretary to Government

Memo No. **9555** /Dated, the **03.12.2014**

Copy forwarded to Finance Departments / A.G.(A&E), Odisha for information and necessary action.

Sd/-

Addl. Secretary to Government

Memo No. **9556** /Dated, the **03.12.2014**

Copy forwarded to Engineer-in-Chief, Electricity-cum-Principal Chief Electrical Inspector, Odisha, Bhubaneswar for information and necessary action. He is requested to upload the Notification in his own Departmental Website Portal.

Sd/-

Addl. Secretary to Government

Memo No. **9557** /Dated, the **03.12.2014**

Copy forwarded to Chief Electrical Inspector (T&D), Odisha, Bhubaneswar / Chief Electrical Inspector (Generation), Bhubaneswar / Electrical Inspector (Hq.)-Cum-Secy., Electrical Licensing Board, Odisha, Bhubaneswar for information and necessary action.

Sd/-

Addl. Secretary to Government

Memo No. **9558** /Dated, the **03.12.2014**

Copy forwarded to Joint Apprenticeship Advisor, O/O Directorate of Technical Education & Training, Odisha / CMD, NALCO, Bhubaneswar / Director Mines Safety (Elect.), O/O Dy. Director General Mines, 3rd Floor, RT-3 Building (Old), CMPDI Campus, Kanke Road, Ranchi, Jharkhand for information and necessary action.

Sd/-

Addl. Secretary to Government

Memo No. **9559** /Dated, the **03.12.2014**

Copy forwarded to Chairman-cum-Managing Director, OPTCL, Bhubaneswar/ CMD, OHPC, Bhubaneswar / M.D,OPGC, Bhubaneswar / Chief Executive Officer, CESU, Bhubaneswar / Chief Executive Officer, Central Service Office (NESCO/ WESCO/ SOUTHCO) ,Plot No.N-1/22, IRC Village, Nayapalli, Bhubaneswar-15/ M.D, WESCO, Corporate Office, At/po: Burla, Dist: Sambalpur / M.D, NESCO, Corporate Office, At/po:Januganj, Dist: Balasore/ M.D, SOUTHCO, Corporate Office, At/Po: Courtpetta Square, Berhampur, Dist: Ganjam for information and necessary action.

Sd/-

Addl. Secretary to Government

Memo No. **9560** /Dated, the **03.12.2014**

Copy forwarded to the Utkal Chamber of Commerce, Bhubaneswar / Cuttack, Electrical Contractors Association, Odisha, Bhubaneswar for information and necessary action.

Sd/-

Addl. Secretary to Government

Memo No. **9561** /Dated, the **03.12.2014**

Copy forwarded to the Director of Printing Stationery and Publication, Odisha, Cuttack for publication of the Notification (statutory) in the next issue of the Odisha Gazette and supply 100 copies of the Notification to this department.

Sd/-

Addl. Secretary to Government

Copy to Guard File.

SYLLABUS FOR ELECTRICAL WORKMAN PERMIT

(See Regulation 13)

(A) For Electrical Wireman (MV)

(a) Domestic Installation upto 650 Volts

- (i) General knowledge about A.C & D.C systems (Generation, Transmission & Distribution, both single phase & three phase in case of A.C system)
- (ii) General knowledge about conductors, insulators, semiconductors, resistors, fuse wires, electrical voltage, current, power & energy both in AC & DC systems.
- (iii) Selection and use of proper sizes, grades of solid & stranded conductors, use of wire gauge etc.
- (iv) Use of test lamps, bells, buzzer, continuity tester & battery in the testing requirements of circuits.
- (v) Methods of testing out of polarity, phasing out of circuits.
- (vi) Connections and diagrams for main switches, distribution boards ceiling roses, plugs, sockets, switches (including 2 way), lamp holders, fans with regulators, MCCB, MCB, RLCB, ELCB, rotary switches and changeover switches etc.
- (vii) Different types of wiring, fittings & other devices required for domestic wiring.
- (viii) Installation work of the classes and with the kinds of cables & wires for building wirings (for fans, lights, small motors and other appliances for domestic use) with CTS, conduit, cleat, wood casing and capping and other systems of wiring permitted under Indian standards (BIS) and safety regulation 2010 of Central Electricity Authority.
- (ix) EARTHING OF INSTALLATIONS: - Importance of earthing, running earth, GI pipe earthing, plate earthing etc.
- (x) Testing for fault, measuring insulation resistance by insulation tester and continuity tester.
- (xi) JOINTING & SOLDERING: - • Making straight & T-joint in solid & stranded conductors and soldering them. • Soldering plugs & sockets on wires & cables and finishing off & insulating.

(b) For Industrial Installation up-to 650 V

- (i) Wiring of 3-phase motors, generators with associated control gears with various type of wires and cables.
- (ii) Knowledge of current carrying capacity of different sizes of wires & cables used for industrial wiring. Choice & selection of appropriate size & grade of wires & cables for industrial appliances of various purpose of use.
- (iii) Knowledge of working of motors, generators with associated control gears, familiarity with normal type of faults and diagnoses of fault location.
- (iv) Measuring earth resistance with an earth testing instrument (earth tester)
- (v) Laying & jointing of cables of voltage up-to 650 V used in industrial wiring.
- (vi) Practice in terminating an underground cable to a Bus Bar chamber. Crimping Lugs to the conductor of the cable, connection to Bus Bar, loop connection for other circuit etc.
- (vii) General Knowledge of safety precautions for personnel & equipments, fire fighting, electric shock to a person, first aid and shock treatment.

(B) For Electrical Lineman (MV)

- (i) Knowledge of 3-phase & single phase voltage system up-to 650 V for connection of voltmeters, ammeters, energy meters etc.
- (ii) Knowledge about power & energy with simple calculations.
- (iii) Reading of energy meters, simple methods for ascertaining the correctness of meter readings by use of lamps for fixed time.
- (iv) Use of clamp on tester (ammeter), voltmeter, insulation tester and earth resistance tester.
- (v) Giving service connection in single & 3-phases and attending to the consumers' complaints.
- (vi) Construction, maintenance and operation of overhead and underground lines & installations including equipments upto 650 V.
- (vii) Maintenance of different switch gears, substation equipment, filtering of transformer oil, connection and maintenance of different types of street lights.
- (viii) Knowledge about operation of air-conditioning, ventilation system & lift.
- (ix) Station Batteries, battery charging equipment.
- (x) Knowledge about the use of stabilizers, inverters etc.

- (xi) Knowledge about the standard conventional symbols used for electrical equipments, systems, the drawings thereon and toolkit.
- (xii) Industrial switch boards, distribution system etc.
- (xiii) Acquaintance with safety regulation 2010 of CEA for overhead and underground lines upto 650 volt.

ENDORSEMENT FOR CABLE JOINTING – Workman possessing Wireman – MV & Lineman – MV permits will have endorsement for jointing upto 650 volts, if during practical test they are found to have acquired adequate knowledge and experience in cable jointing work for cables of different types and installations.

(C) For Electrical Workman (HT)

(Overhead and underground installations and equipments upto 33 KV)

The syllabus prescribed for Lineman (MV) is common to the syllabus of Workman (HT) with the following syllabus.

- (i) General knowledge about the HV systems (Generation, Transmission & Distribution).
- (ii) Construction, Maintenance & Operation of over head lines installation, substations and equipments upto 33 KV.
- (iii) Knowledge about the line & substation, construction standards i.e. RECs, IS standards for HV systems.
- (iv) Principle and working of alternating current, direct current, generators and their parallel operations.
- (v) Principle & working of Transformers and their parallel operation.
- (vi) Principle & working of Alternating Current & Direct Current motors and their speed characteristics, controls etc.
- (vii) General use of protective switchgears, i.e. relays, CTs, PTs, Lightning arresters etc.
- (viii) Simple estimation of requirements of the materials.
- (ix) Measurement of power, power factor and improvement of power factor in both single phase and 3-phase system.
- (x) Earthing of HV systems.
- (xi) Different Circuit Breakers used in HV systems.

ENDORSEMENT FOR CABLE JOINTING – Workman possessing Workman – HT permits will have endorsement for jointing upto 33 KV, if during practical test they are found to have acquired adequate knowledge and experience in cable jointing work for cables of different types and installations.

Additional Syllabus for Mining Workman.–

Workman of MV & HT category will have endorsement for working in the mines.

WIRING: - Wiring layouts of different types such as cleats, lead covered, cab type sheathed for lighting purposes at the surface and armoured cables for power and lighting installation underground.

CIRCUIT KNOWLEDGE: - Electrical connections for DC & AC generators, DC & AC Motors, their starters and regulators, switch Board & Transformer etc, Distribution boards with circuit breakers, switch fuse units and gate switches, Battery charger and lamp cabin.

APPARATUS INCLUDING FLAME PROOF APPARATUS SUITABLE FOR USE IN HAZARDOUS LOCATIONS IN COAL AND OIL MINES:

INSTALLATION AND MAINTENANCE OF - : Electrical winders including automatic contrivances, haulages, ventilating fans, pump units and compressors, their controls gears and starters. • Rectifier, rotary convertors, electric locomotives and battery charging station. • Portable and transportable apparatus. • Power and lighting transformers and capacitors. • Safe signaling equipment including telephone equipment. • Shot firing apparatus including cables, their uses routine tests and maintenance.

Elementary calculation knowledge about power, load, energy consumption in pumping, hauling and other machineries etc..

TESTING AND FAULT ATTENDANCE – Detection and location of earth other faults in electrical apparatus and cables, low voltage and remote control circuits. Insulation and continuity tests, rectification of faults, tests for insulation resistance to earth, testing of leakage protective device, Earth testing and its continuity.

FLEXIBLE TRAILING CABLES FOR PORTABLE AND TRANSPORTABLE APPARATUS – Knowledge of different types of flexible cables including pliable armoured cables, their installation, maintenance fault detection, efficient repairs by vulcanized joints and testing.

SAFETY AND PROTECTIVE DEVICES - Knowledge of earth of metal frames of machineries. Use of H.R.C. cartridge, fuse in circuit breaker as back up protection. Overload, no-volt and earth leakage protection of circuit breakers and starters.

FIRE PRECAUTIONS – Fire extinguishing appliances & their use in mines & oil fields.

SAFETY RULES – working knowledge of the Safety Regulation-2010 of CEA with particular reference to chapter for Mining and Oil field. Safe & minimum clearance above the ground of lowest conductor of over head lines or over head cables.

(D) For Electrical Workman (E.H.T)

The syllabus prescribed for Workman (HT) is common to the syllabus of Workman EHT with the following syllabus.

1. General knowledge about power Generation, Transmission and Distribution system in India.
2. Advantage of High Voltage & Extra Voltage Systems.
3. High Voltage & E.H. Voltage A.C. & D.C System.
4. Knowledge in Extra High Voltage transmission system.
5. Types of Tower, shapes & geometry:-
 - (a) Self-supporting towers, conventional guyed towers, Chainette Guyed Towers.
 - (b) Tower designation:- Suspension Tower, Tension Tower, Transposition Towers, Special Towers.
 - (c) Tower Height, Width, Tower anatomy, foundation.
6. Safe electrical clearance of E.H.V. Lines, Spacing between conductors.
7. Simple knowledge about Tower members, member selection & redundant members, Bolts & nuts etc.
8. Testing of towers -: Testing requirements.

9. Conductors used in EHV, Earth wire, Earth insulator, stringing span, jumper, Hot line stringing of EHV lines.
10. Tools used in EHV lines: Theodolite, Dumpy level, Gin pole / Deric pole, polypropylene rope, single shane pulley Hydraulic compressor, Earth Tester, winch etc.
11. EHV underground cable, cable laying, permissible bending of cables, Depth of layings. Maintenance, Inspection of Cables, Cable Joints, Cable Termination Crimp Connections, Fault locating in U/G cables, Methods of fault location, Pre-locating the fault distance, pinpointing of cable fault.
12. SUB-STATION –
 - (i) Standard layout of Sub-station, bay size, equipment position.
 - (ii) Types of bus bar materials, clearance of equipments and rigid conductors spacing for phase strung bus, standard bus, equipment elevation.
 - (iii) Earthing practice, earth mat.
 - (iv) Earth measurement 3 point & 4 point method.
 - (v) Surge / lightning arrester.
 - (vi) Transformer, Isolators, Breakers, earth switch, CT,PT,CVT, Post Insulators, wave trap, capacitor bank etc.
 - (vii) Transformer's testing & maintenance of transformers.

Checks: Silica gel, oil test, Insulation test, PI value check, oil & winding temperature calibration, BDV test, gas analyzing, Bucholz relay, oil level check, Tap changer, moisture content test, cooling fan operation, ratio check. Bushing CT Check, oil filtration etc.
 - (viii) Maintenance schedule of breakers, transformers, CT,PT,CVT,PIs, lightning arrester, earth pit.
 - (ix) Duties of operation persons in Sub-station.
 - (i) Line Permit.
 - (ii) Isolation & restoration of system to work on permit.
 - (x) Station batteries, maintenance batteries, battery charger.
 - (xi) Protective relays used for EHV systems. Energy Meters, Ammeter, Voltmeter, Power Factor Meters, Metering.
 - (xii) Control equipments.

SYLLABUS FOR ELECTRICAL SUPERVISOR CERTIFICATE OF
COMPETENCY (SCC – MV)

Electrical Engineering Paper (Written Test)

Part – I & Part – II for General Category of S.C.C. Examination

Part – I & Part – III for Mining Category of S.C.C. Examination

PART – I

(Common Syllabus for General & Mining category)

Electricity Theory (Elementary Knowledge)

Principles of Electricity – Electric voltage, Current and resistance, Ohm's law – specific resistance, Laws of resistance and their application for calculating voltage drop, series and parallel circuits, Practical units of voltage, current, resistance, power and energy. Relation between electrical power unit (KW) and Mechanical Power Units (HP).

Electro Magnetism – Concept of Electro Magnetic Force (EMF), production of E.M.F., Flemings Right and Left Hand Rules, Magnetic, Chemical and heating effects of electric current. Magnetic properties of material, Electromagnets and their various applications.

Materials – Conductors, Semiconductors and insulator materials and their relative merits. Transformer oil, Effect of heat and moisture on insulation. Lubricants and their uses.

Different types of wires, cables, switches, circuit breakers, cutouts, etc,

Generation of Electricity – Sources of natural energy. Renewable and Non-Renewable source methods of production of electricity both Alternating Current and Direct Current.

A.C. Generators (Alternators) – Essential components and constructional feature, Methods of voltage and frequency control conditions and methods for synchronizing, simple associated switch board and its accessories.

D.C. Generators – Essential components and constructional features, Shunt, series and compound dynamos and their characteristics, causes for sparking. Interpoles, Commutators and their maintenance. Carbon brushes, their adjustment and care. Methods of voltage regulation. Conditions for parallel operation, simple associated switch board and its accessories.

Batteries – Primary cells, Dry cells, storage or secondary batteries or accumulators and their installations. Lead acid cells, Nickel, Iron or Alkaline cells. Initial and subsequent charging of batteries. Charging circuits and their calculations. Series and parallel circuits. Maintenance of batteries. Use of Hydrometers.

A.C. Motors – Theory of induction (squirrel cage and slip-ring type) synchronous and commutator motors, their uses, installation, method of starting, speed control and reversal of direction.

D.C. Motors – Theory of series, shunt and compound wound type motors, their uses, installation, method of starting, speed control and reversal of direction.

A.C. Circuits – Knowledge of vectors. Phase and phase difference. Resistance, inductance and capacitance in an A.C. Circuit. Periodicity or frequency. Power and power factor. Single phase and three phase systems. Star and delta connections. Phase sequence.

Controlling and Regulating Gear – Knowledge of various types of switches, circuit breakers, cutouts, starters, regulators and protective devices for both A.C. and D.C. motors and their wiring with the motors.

Transformation – Knowledge of single phase and three phase transformers, their construction, use and maintenance. Phasing out, parallel working, auto transformer, transformer tapplings, temperature rise, instrument transformer.

Conversions – Principle of operation of motor generator sets, rotary convertors and mercury arc rectifiers.

Transmission and Distribution –

Overhead Lines – Simple calculations and general principles of construction of low, medium and high voltage lines. Size of conductors, length of spans, sag, strength of poles, spacing of conductor, cross arms, effect of temperature, wind pressure, ice and snow, tension on wire. Insulators, brackets, stays, struts, guard wires and other protective devices. Earthing, lightning arrestors, lightning conductors and their testing and fault location.

Underground Cables – underground cables, simple calculations and general principles of laying cables direct in ground, intrenches and pipes. Handling, bending, jointing, plumbing. Underground and above ground junction boxes. Distribution board and pillars. Joint box compound, melting of compound and filling boxes with compound. Testing and fault location.

Illumination – Metal filament lamps, fluorescent lamp circuits, high voltage luminous tube sign installations. Photometric units and simple measurements. General requirements of efficient lighting and elementary calculations. Street lighting. Time switches.

Generation: –

(a) DC and AC power supply for auxiliaries, arrangement of unit auxiliary and station service boards, station lighting and automatic changeover. Station batteries and charging methods. Standby and emergency power and lighting systems.

(b) Testing & Measurement – Working principle and basis of instrument and measurements. Details of measuring instruments for pressure, flow, temperature, level, vibration, alignment and current, voltage, power, reactive power, frequency, energy, winding temperature, auto controllers, recorder, insulation, tester, its use for primary detection of faults, data acquisition system, digital distributed control, UPS etc. Testing of electrical & mechanical testing equipments.

- (c) Control & Protection – Sequential operation & interlocks, general machine start/stop, sequence of operation.

SAFETY RULES – Working Knowledge of –

- (a) Safety regulation -2010 of CEA (Measures relating to safety and electric supply)
- (b) Fire safety procedures, fire protection of generators, transformer and fire fighting and emulsifier type protection, regarding Factory Act, Electricity Act-2003.

Protection and restoration of persons suffering from electric shock.

PART – II
Syllabus for General Category of SCC (MV)

Electricity Utilization for –

Domestic installation –

- ❖ **WIRING** - Wiring layout of different types such as cleat, metal sheathed, wood casing and capping, cable type sheathed, conduit and armoured cable for lighting and power installations in residential premises together with the necessary switchgear, estimate of materials and cost of different types of installations. Wiring of temporary installations and portable appliances.
- ❖ **CIRCUIT DIAGRAM** – Electrical connections of various circuits for (i) House wiring including those for main and sub-distribution boards, switches and cutouts etc. together with the load statement for each circuit, (ii) Lifts with their safety devices.
- ❖ **APPARATUS** – Installations and maintenance of heaters, cookers, refrigerators and other domestic appliances. Electric bells and indicators. Small motors for pumps and electric lifts.
- ❖ **ENERGY MEASUREMENT AND CHARGES** – Energy meters both D.C. and A.C. for house service.
- ❖ **SIMPLE CALCULATION** – Simple calculations relating to cost of energy, elementary knowledge of methods of charging for energy.
- ❖ **TESTING AND FAULT ATTENDANCE** – Detection and location of faults in domestic appliances and wiring installations. Insulation and continuity test. Rectification of faults. Tests for insulation resistance to earth. Earth testing.
- ❖ **PROTECTIVE DEVICES** – Elementary knowledge of the use of fuses and cutouts, earthing of domestic appliances, motors etc. use of lighting arrestors.

Industrial installation –

- ❖ **WIRING** – Wiring layouts of different types such as cleat, wood casing and capping, metal sheathed, cable type sheathed, conduit and armoured cables for lighting and power installations in industrial premises together; with the necessary switchgear. Estimates of materials and cost of different type of installations. Wiring of temporary installations and portable appliances.
- ❖ **CIRCUIT DIAGRAMS** – Electrical connections for – D.C. & A.C. Motors, their starters regulators, Main and sub-distributing boards with circuit breakers, switches, fuse units with load statement for each circuit, D.C. & A.C. Motors, their starters regulators, Battery charging equipments, Converting machinery, Lifts with their safety devices.
- ❖ **PUMP INSTALLATIONS** – General principles and elementary calculations of head, power and energy requirements.
- ❖ **APPARATUS** – Installation and maintenance of generators, electric motors, electric lifts, electric furnaces, electric welding plants, haulage and winding machines, cooling and heating appliances.
- ❖ **POWER AND ENERGY MEASUREMENT AND CHARGES** – Measurement of power, Wattmeters, energy meters both D.C. & A.C., power factor correction by capacitors.
- ❖ **SIMPLE CALCULATION** – Simple calculations relating to cost of power and energy, elementary knowledge of methods of charging for demand and energy.
- ❖ **TESTING AND FAULT ATTENDANCE** – Detection and location of faults in D.C. & A.C. generators, motors, overhead distribution lines and underground cables, electric instruments and apparatus and wiring installations. Rectification of faults, Insulations and continuity tests. Tests for insulations resistance to each earth testing.
- ❖ **PROTECTIVE DEVICES** – Elementary knowledge of earthing of generators, motors, machines, installations and appliances. Use of lightning arrestors, fuses including high rupturing capacity fuses, cutouts, circuit breakers, over load and no volt protections, thermal trips, fused breaking switches and over speed protection.

PART - III
Syllabus for Mining Category of SCC(MV)

Mines installations –

- ❖ **WIRINGS** – Wiring layouts of different types such as cleats, lead covered, cab type sheathed for lighting purposes and armoured cables for power installations, different types of trailing cables and their use.
- ❖ **CIRCUIT DIAGRAMS** – Electrical connections for –: • D.C. & A.C. generators, switch boards, transformers etc. • Distribution boards with circuit breakers switches, fuse units and gate-end switches. • D.C. & A.C. motors, their starters and regulators.
- ❖ **APPARATUS** – Installation and maintenance of –: • Electrical Winders, haulages and pump units, their control gears and starters. • Rectifiers rotary convertors and electric locomotives. • Portable and transportable machineries, coal cutting machines, loaders, conveyors, gate-end switches. Drill panels with drill units and their control systems. • General principles and elementary calculations of load, power and energy consumption in pumping, hauling and winding installations and other working face machineries.
- ❖ **POWER AND ENERGY MEASUREMENT AND CHARGES** – Measurement of power, Wattmeters, energy meters both D.C. & A.C. power factor correction by capacitors. Simple calculations relating to cost of power and energy. Elementary knowledge of methods of charging for demand and energy.
- ❖ **TESTING AND FAULT ATTENDANCE** – Detection and location of earth or other faults in electrical apparatus and cables. Insulation and continuity test. Rectification of faults. Test for insulation resistance to earth. Testing of leakage, protective devices. Earth testing.
- ❖ **PROTECTIVE DEVICES** – Elementary knowledge of earthing of metal frames of machineries. Use of fuses. Over-load, no-volt and earth leakage protection of circuit breakers.

SAFETY RULES – Working knowledge of –: The CEA Safety Regulation - 2010 i.e. (Measures relating safety and Electric supply) for mining installation.

SYLLABUS FOR ELECTRICAL SUPERVISOR CERTIFICATE OF
COMPETENCY (SCC – HT)

PART – I
(FOR GENERAL CATEGORY)

1. Subject covered under the syllabus for supervisor (MV) and the following:-.
2. HT Overhead Lines – 11 KV & up to 33 KV:
 - Survey, Design, Construction standards, Foundation, Erection, Stringing and Construction equipments.
 - Testing, Fault locations, commissioning, Maintenance and Protections, including safety devices and testing equipments.
 - Selection of supports, cross arms brackets, stays, struts, insulators and associated hardware.
 - Types and size of conductors. Length of spans, sag, spacing of conductors, effect of temperature, wind pressure, ice and snow on tension of conductors, lighting on conductors.
 - Knowledge about construction standards of REC & CBIP for lines, sub-station and other equipments utilized in this HT system.
 - General requirements of earthing, lightning arresters, guard wires, relays and other protective devices. Each type of earthing, size of earth conductor, pole earthing, lightning arrester earthing etc.
3. HT Cables – 11 KV & 33 KV and Control Cables:
 - Criteria for selection of power cables, types of cables, continuous current ratings of underground cables, short time loading of power cables, rating factors for intermittent loading, power factor of cables.
 - Guidelines for cable laying, recommendation and checklist for supervising cable laying work, termination, jointing, plumbing of cables, crimp connection.
 - Underground and surface junction boxes. Fault locating in underground cables, power cable sheath fault. Equipments used & methodology for locating fault in pilot cable etc.

4. HT Sub-stations and Control Room:

- Layout, Design, Construction standards of HT Transformers and associated equipments (i.e. CBs, Insulators, LAs, Capacitors, CTs, PTs etc.). Gas insulated switchgear & sub-station. Sub-station earthing, Earth Mat, Tower groundup.
- Power and distribution transformers, their erection, commissioning, fault locations and maintenance.
- Protective relays and measuring equipments and their networking.
- Testing, Commissioning, fault locations, maintenance and protection of HT cables and testing equipments.
- Design and installation of capacitor banks and their maintenance.
- Erection, Testing, Commissioning and Maintenance of Control Room equipments including station batteries and communication system.

5. HT Motors and Generators (DC and AC):

- Installation, Testing, Commissioning, protection and Control and Maintenance of HT Industrial Motors.
- Working of generating plants and power stations (Hydro Thermal, Nuclear etc.) including auxiliaries and their maintenance.
- Insulating materials, operating temperatures.

6. Working of Alternators, convertors and rectifiers and their applications.

7. Electrical Traction and selection of motors for Electrical locomotives.

8. Use and maintenance of High Voltage apparatus like x-ray machines, welding machines, neon signs etc.

9. Operational knowledge on measuring instruments i.e. oscilloscopes Ammeters, Voltmeters, Multimeters, VTVM, Tongue Testers, Meggers, HV testing Kits etc.

10. Generation, Transmission and Distribution of the State, Inter-State and the Central Net-Work.

11. Illumination, Fire fighting and Earthing systems including their maintenance.

12. Tariffs, including HT Tariffs, method of charging for demand and energy, power factor and billing.
13. Basics on operation and data analysis of computer, as relevant to the operation and maintenance in electrical net-works.
14. Preparation, representation, interpretation of electrical drawings and execution of electrical works.
15. Specifications, evaluation, analysis of electrical schemes, tendering, purchase orders, procurements, stores, inventory etc.
16. Conversant with electricity Act -2003, CEA safety regulation and the distribution code of OERC.

PART – II
(FOR MINING CATEGORY)

1. Syllabus covered for Supervisor Certificate of Competency (MV) Examination with the following.
2. HT Overhead Lines – 11 KV and up to 33 KV:
 - Survey, Design, Construction Standards, Foundation Erection, Stringing and Construction equipments.
 - Testing, fault locations, commissioning, maintenance and protections including safety devices and testing equipments.
 - Selection of supports, cross arms, brackets, stays struts insulators and associated hardwares.
 - Types and size of conductors, length of spans, sag, spacing of conductors, effect of temperature, wind pressure, ice and snow on tension of conductors, lighting on conductor.
 - Earthings, lightning arresters, guard wires, relays and other proactive devices.
3. HT Cables – 11 KV and 33 KV and Control Cables:
 - Classification of cables, criteria for the selection of power cables, PVC & XLPE underground cables. Classification of tests for cables laying, safe handling of cable drums, cable joints, cable terminations, crimp connections, maintenance of electric cable, flexible cable, flexible cables for portable machines, faults in underground cables system, methods of fault location underground cable system.
4. HT Sub-Stations and Control Room:
 - Layout, design, construction standards of HT transformers and associated equipments (i.e. CBs, Isolators, Las, Capacitors, CTs, PTs, etc)
 - Power and distribution transformers – their erection, commissioning, fault locations, and maintenance.
 - Protective relays and measuring equipments and their networking, Transformer protection, Generator, Diesel Generator protection.
 - Testing commissioning, fault locations, maintenance and protection of HT cables and testing equipments.

- Design and installation of capacitor banks and their maintenance.
 - Erection, testing, commissioning and maintenance of control room equipments including station batteries and communication system.
5. HT Motors and Generators (DC and AC):
- Installation, testing, commissioning, protection and control and maintenance of HT industrial motors.
 - Working of Generating plants and power stations (Hydro, Thermal, Nuclear etc) including auxiliaries and their maintenance.
6. Working of Alternators, convertors and rectifiers and their applications.
7. Operational knowledge on measuring instruments i.e Oscilloscopes Ammeters, Voltmeters, Multimeters, VTVM, Tongue Testers, Meggers, HV testing kits etc.
8. Illumination, fire fighting and earthing systems including maintenance.
9. Preparation, representation, interpretation of electrical drawings and execution of electrical works.
10. Flame proof equipment / intensively safe for underground switch board, panels, breakers etc. for underground.
11. Basics on operation and data analysis of computer as relevant to the operation and maintenance in electrical net-works.
12. Conversant with electricity Act-2003, Safety Regulation-2010 of CEA particularly to the relevant statutory requirements for mines. Knowledge about relevant Indian Standard for electrical equipments & installations of mines.

**SYLLABUS FOR ELECTRICAL SUPERVISOR CERTIFICATE OF
COMPETENCY (SCC – EHT)**

(A) SUB-STATION

1. Layout & Location of Sub-Station i.e. 400/220/132/33 KV.
2. Main equipments & specification of equipments.
3. TRANSFORMER:- • Basic principles of transformers & working principles of its accessories like coolers, on load/off load Tap changer, breathers, conservator, bushing of different types, Buchholz Relay, Indicators & Alarms. • Transformer routine & type tests, maintenance and repair, failure and its causes. • Transformer oil, testing, filtration and its values to ascertain its condition. • Parallel operation of transformers, regulation & voltage control by tap-changing, commissioning tests, routine maintenance.
4. BREAKERS –: • Function of different types of breakers i.e. indoor, outdoor, MOCB, SF₆ etc. • Normal current rating, rupturing capacity. • Commissioning procedure, operation & maintenance, failure and its causes.
BUS BAR–: • Indoor & Outdoor capacity forces on them during short circuit, mounting & bus bar mounting and clearances. • Outdoor-Strung / Tubular type supports bus bars, their current rating, jumpers & clearances. • Bus bar fitting / connectors.
5. CURRENT AND POTENTIAL TRANSFORMERS – types, Working principle, Rating and Accuracy class and testing.
6. ISOLATORS – Types (Tilting, rotating, horizontal, vertical tandem etc.) with and without arching horns, current rating, breaking of circuits, interlock with circuit breaker, maintenance of Isolators.
7. LIGHTING ARRESTOR –: • Types, Principle of working, rating, earthing, location and testing of lighting arrestors & its maintenance. • PDCC, Carrier Communication, PLCC and protection through PLCC and Carrier inter tripping.
8. REACTOR – Types, Principle of working, rating, installation and commissioning, repair and maintenance.
9. CAPACITOR BANK –Types, Principle of working, rating, installation, commissioning, repair & maintenance.
10. PROTECTIVE RELAYS – Types of relays, principle of working, rating, installation and commissioning, repair and maintenance. The basic principle of protection of equipments/lines i.e. Local & back up protection, Transformer Protection, Line Protection & New generation Relays, their testing and maintenance.

11. CONTROL ROOM –: • Necessity and function of control boards & panels, types of control panels, instruments on control boards and panels. • Mimic diagram, indicators, semaphore annunciation system including alarm & bell testing of relays and setting principle. • Remote control of breakers, isolators, tap changers, indicators in control boards and panels. • Control cables & power cables.
12. AUXILIARY SUPPLY & BATTERY –: • Battery ratings, capacitors, charging and discharging and trickle charger. • Rectifiers. • Importance of DC supply & its function, Auxiliary DC supply maintenance of Battery system.
13. EARTHING –: • System Earthing, Safety earthing, method of earthing, solid, resistance, impedance, Peterson coil earthing, earthing of lighting arrestors, importance & advantages of each type. • Different types of earth electrodes, earth mats, recommended values of earth resistance and its measurement. • Design of earth mats. • Knowledge about step & touch potential.
14. GAS INSULATED SWITCHGEAR – Construction of GIS, Metal enclosures, insulators, conductors and connectors, circuit breaker, CT, PT, surge arresters, bay connections, indoor & outdoor installations under GIS category.

(B) LINES:-

1. Detailed survey and alignment of lines.
2. Types of Tower, Template & Tower spotting, stub setting, concreting, back filling.
3. Erection of towers, tightening, punching of bolts, electrical clearances.
4. Type of Insulators, electrical/Mechanical characteristics, hardwares and fittings.
5. Type of conductors, current carrying capacities, earth wires and sizes.
6. Stringing equipments & use, Tension & Sagging of conductors, stringing procedure, statutory phase to phase & earth clearances, jumpering, use stringing chart.
7. Earthing of Towers, types of Tower earthing.
8. Testing conductor continuity, Insulators resistance.
9. Charging / discharging of EHV Lines, Live Line testing.
10. Safety procedure, procedure for line clearance.
11. Identification marks, phase plates, circuit plates, anti climbing devices, step bolts, bird guards, number plates, danger plates, anti-vibration dampers.

12. Maintenance, tests and measurements, use of construction/maintenance tools & equipments – Theodolite, Dumpy level, measuring tapes, conductor jointing tools, bolted come-alongs, winches, Aerial trolleys, Aerial rollers, Thermometers, Dynamometers, Lineman's ratchet, pull-lift devices, wire ropes, spanners, twin backles etc & testing equipments.
 13. Tower foundation, investigation of foundations of Towers, repairs of foundation of a Tower line in service, foundation defects & repairs.
 14. Manpower, Tools and plants.
 15. Hot line stringing of HV lines.
- (C) **CABLES:-** HV & EHV category cables, criteria for the selection of cables, short time loading of power cables. EHV tests on cables, guidelines for cable laying, cable joints, cable terminations, crimp connections, fault locating in underground cables, sheath fault, sheath fault locating equipment and methodology.
- (D) **HVDC:-** DC transmission, HVDC structures, busbars, clearances, earthing system, circuit breaker, tests on HVDC CB, instrument transformers, standard layout in sub-station, different protective devices.
- (E) **FIRE PROTECTION & FIRE FIGHTING:-** Classification of fire, various types of fire extinguisher, fire protection for power transformer, multi-fuse system of protection, CO₂ installation, Fire hydrant system, General safety precautions and practices in operation & maintenance.
- (F) **CLEARANCE & COMPLIANCE OF CEA SAFETY REGULATION** – • Minimum clearance between phases and phase to ground and sectional clearance of equipments at different voltages level. • Provision of CEA Safety Regulation relating to sub-stations and lines.

AFFIDAVIT

(FOR DUPLICATE LICENSE / SCC / PERMIT)

(To be executed on Stamp Paper, as per the Odisha Stamp Duty Act)

I S/o..... residing at
..... has lost / torn my License / SCC / Permit at
..... solemnly affirm and state on oath as follows.

That my License / SCC / Permit No..... valid up to is
lost on for which I have lodged a police complaint vide
No..... dtd..... at that in the event of finding the lost License /
SCC / Permit, I undertake to surrender the same to the Electrical Licensing Board
Odisha (ELBO), Bhubaneswar.

What I am stated above is true and correct to best of my knowledge and
information and belief.

Photo with
signature of
the applicant
to be attested
by the Notary

SIGNATURE OF THE APPLICANT

SWORN TO BEFORE ME.

ATTESTED BY NOTRAY

ANNEXURE-VI**RETURN FORM FOR ELECTRICAL CONTRACTORS**

Return for (Tick the appropriate box) for the year _____

1 st Quarter i.e. Apr-Jun	2 nd Quarter i.e. July-Sep	3 rd Quarter i.e. Oct-Dec	4 th Quarter i.e. Jan-March

Name & Address of the Contractor _____

Name of the owner of the installation	Name of Work and Type of installation	Cost of the work in Rs.	Name of the Supervisor & SCC No.	Name of the Workman with permit/Workman without permit and Helper engaged for each installation	Permit No.	Period on which the Workman and Helper were engaged	Period on which the Supervisor was present for supervision and (date of final check)	Remarks
1	2		3	4	5	6	7	8

Full Signature of the Supervisor
S.C.C.No.Full Signature of the Contractor
Electrical Contractor License No.

Signature Not Verified

Digitally signed by PRIYABRATA
SAMANTARA
Date: 2026.05.12 19:06:18 IST
Location: Odisha-OD