



Name of Work: Construction of a Workshop Shed for FIST/TBI including all civil, electrical and mechanical, water supply, sanitary installation and external development works on LUMPSUM basis at IIT Patna campus at Bihta

January 2023

BID DOCUMENT

Indian Institute of Technology Patna

Name of work: Construction of Workshop Shed including all civil, electrical, mechanical, water supply, sanitary installation and external development works on LUMPSUM basis in IIT Patna campus at Bihta

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Indian Institute of Technology Patna

1. NOTICE

The Registrar, on behalf of Director, Indian Institute of Technology, Patna invites LUMPSUM (Engineering, procurement and construction) bid under two bid System (Technical Bid and Financial Bid) from experienced and reputed contractors for the following:

1	Tendering Document No.	IITP/IWD/WS/01/2023; dated 04.01.2022
2	Name & brief scope of Works	Construction of Workshop Shed including all civil, electrical, mechanical, water supply, sanitary installation and external development works on LUMPSUM basis in IIT Patna campus at Bihta.
3	Estimated cost put to tender (ECPT)	Rs.2,14,94,109/-
4	Earnest Money	Rs. 4,30,000/- (to be refunded) (EMD inform of FDR, Bank Guarantee etc. if any should reach the office of the Executive Engineer (Rz), IWD, Admin building, IIT Patna, Bihta, Patna, 801106 in original hard copy within the last date for submission of bids)
5	Cost of tender documents	Rs.0.00/-to be deposited in the form of separate DD in favour of Registrar IITP, payable at IIT Patna.
6	Period for completion	15 months from the date of handing over of site by IITP
6	Pre-bid meeting	11.07.2022 at 11:30 pm in the meeting room at second floor at Directorate side in Admin block of IITP at Bhita Campus
7	Bid Submission	25.01.2023 up to 5:00 P.M.
8	Technical bid opening	26.01.2023 at 5:30 P.M.
9	Financial bid opening	To be intimated later on.

12.	Mobilization Advance	10% (Ten Percent) of Contract Value against Unconditional Bank Guarantee
13.	Interest Rate of Mobilization Advance.	Simple Interest Rate of 10.50% (Ten point Five Percent only) Per Annum
14.	Recovery Rate of work force if found wanting.	As per Clause No. 36(i) on Pg 141 of the tender document.
15.	Defect Liability period	One year from the date of completion to the satisfaction of IITP.
16.	Drawings	Construction is to be done as per the attached architectural and structural drawings

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Registrar IIT, Patna

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2. Eligibility Criteria

Bidder must meet the following eligibility Criteria:

A. Technical Criteria:

Experienced agencies shall be considered eligible for this work, which have successfully completed the following during last seven years ending 31.12.2021.

1. Three similar completed works costing not less than the amount equal to 40% of the estimated cost;

OR

2. Two similar completed works costing not less than the amount equal to 50% of the estimated cost;

OR

3. One similar completed works costing not less than the amount equal to 80% of the estimated cost;

One Completed work of any nature (either part of (i) or a separate one) costing not less than the amount equal to 40 % of the estimated cost put to tender with some Central Government Department/State Government Department/Central Autonomous Body/Central Public Sector undertaking.

“Similar works” shall mean construction of workshop (Steel framed buildings, electrical, water supply, sanitary and external development works all executed under one agreement in India) in technical Institutions like IITs, NITs, and institutions of national importance.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple interest rate of 7% per annum, calculated from the date of completion and up to 31.12.2022

B. Financial Criteria:

- (i) The bidder should have achieved an average annual financial turnover (gross) of Rs. 1.08 crore on civil construction works during the last three financial years ending 31st March 2021. This should be duly audited by Chartered Accountant. The multiplication factor of 7% per annum simple interest is not applicable on the Annual Financial Turnover figures.

- (ii) The bidder should not have incurred loss (profit after tax should be positive) in more than two years during last five financial years ending 31st March 2021, duly audited and certified by the Chartered Accountant.
- (iii) The bidder should have a minimum solvency of Rs. 85.98 Lakhs. The solvency certificate should be issued not earlier than 01.12.2021.

C. Documents to be submitted along with technical bid:

- (a) Scanned copy of Receipt of the Earnest Money Deposit (EMD) / its exemption, if any.
- (b) Scanned Copy of GST No. and Scanned Copy of PAN Card.
- (c) Scanned copies of work order and experience certificates as per the technical criteria of tender document, along with information regarding works executed in the last seven years as per Annexure II of NIT.
- (d) Scanned Copy of Audited Annual Accounts for Financial Years 2018- 19, 2019-20 and 2020-21. Average Annual Turnover for last three financial years i.e. 2018- 19, 2019-20 and 2020-21 should not be less than 50 % of the estimated cost & Should not have incurred any loss in more than two years during the immediate last five consecutive financial years, ending 31.03.2021. Also, to provide with a certified CA copy of turnover summary as per Annexure I of NIT.
- (e) Copy of ESIC & EPF Registration copy
- (f) Solvency certificate as per the format in Annexure III of NIT.
- (g) Affidavit as per Annexure IV of NIT

3. Information & Instruction of bidders

The bidder must ensure that all the information required in the documents is furnished by him complete in all respects. He would not be allowed to withdraw any document, or to rectify any information furnished therein, after submitting the bid.

1. The bidder should give an affidavit that the information furnished in schedule I to III is correct. If any information is found to be incorrect at any time, the offer of the bidder shall be rejected, and action be taken as per rules up to the extent of debarring his participation in future intenders of IITP and forfeiture of EMD & performance security.
2. Bidders must do paging of all enclosures submitted as part of bid documents.
3. As part of technical evaluation, the IIT Patna reserves the right to inspect any of the completed works of the bidder to ascertain the quality aspect. In case, the general quality of the work in the opinion of the IITP team visiting is found unsatisfactory, the technical bid of that bidder shall be rejected.
4. The bid may be rejected in case of the following: -
 - i) If bid is not accompanied with the requisite documents mentioned in bid document or is not in accordance with procedure as specified in Para 1.
 - ii) Non-submission of Bid Security.
 - iii) If all the copies enclosed in support or affidavit is not duly attested.
 - iv) The Bidder's GST Clearance Certificate is not up to 31.03.2021.
5. Earnest money Deposit (EMD) of Rs.4, 30,000/- (Rupees Four Lakh Thirty Thousand only) to be deposited in the institute's account through SBI i collect and the receipt of submission is to be uploaded along other techno financial documents. For details regarding submission of EMD, the webpage with following link may be visited: <https://www.iitp.ac.in/images/pdf/snp/SBI%20I-Collect.pdf>
6. The bidder may carefully note that Joint venture is not allowed.
7. The pre-bid meeting will be held on **11.07.2022** in the meeting room at Directorate side of Admin building, IIT, Patna at its campus in Bihta. The bidders should send the queries if any to the office of Registrar, IIT, Patna at least three days before the pre-bid meeting. The queries will be clarified and the bidder shall be asked to sign the same. This document shall be considered as a part of the tender document.
8. Bidders will need to produce in original of their all-supporting enclosure for verification by IIT, if required. Failure to comply with this requirement will result in disqualification of the bidder without any recourse.
9. The financial bid containing financial proposal and supplementary financial proposal, if provided, will be opened on-line in the presence of only those bidders

who are qualified technically. Date of opening of financial bid shall be informed at a later date through CPP Portal. The opening of financial bid will be on line.

10. If any bidder withdraws his tender prior to expiry of said validity period or extended period or makes modification in the rates, terms and conditions of the tender within the said period, which are not acceptable to IITP or fails to commence the work in the specified period/, fails to execute the agreement, the IITP shall, without prejudice to any, other right or remedy, be at liberty to forfeit the amount of Bid Security / EMD given in any form absolutely. If any bidder, who having submitted a tender does not execute the agreement or start the work or does not complete the work and the work has to be put to re-tendering, he shall stand debarred from participating in such re-tendering in addition to forfeiture of Earnest Money/Security Deposit/and to other action under agreement.
11. All tenders, in which any of the prescribed conditions are not fulfilled or which have been vitiated by errors in calculations totaling or other discrepancies or which contain over-writing in figures or words or corrections not initialed and dated will be liable to rejection.
12. The successful bidder shall have to submit a Performance Guarantee of 5% (Five Percent) of the tendered amount in the appropriate form as given in tender document within 15 days of issue of letter of acceptance.
13. After acceptance of the bid by competent authority, the Registrar, IITP shall issue letter of acceptance. After the work is accepted, the contractor will have to enter into an agreement with Registrar, IITP.
14. In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof, or in the event of the absence of any partner, it must be signed on his behalf, by a person holding a Power of Attorney, authorizing him to do so. Such power of Attorney will be submitted with the bid.
15. Sales tax/GST, purchase tax, turn over tax, Excise duty, Service tax, work contract tax or any other tax and CESS on materials and Labour EPF and ESIC etc as applicable shall be paid by the bidder himself. The bidder shall quote his rates considering all such taxes.
16. For the purpose of constructing Contractor's yard, godown, office, labour hutment, etc. the contractor may utilize the land and existing buildings/structures allocated to him by IITP after obtaining requisite permission from the Registrar subject to availability and suitability of the same. All expenses in connection with construction or maintenance or removal etc. of such items shall be borne by the Contractor. Nothing extra shall be paid on these counts to the contractor.

4. NOTICE INVITING TENDER

The Registrar, on behalf of Director, Indian Institute of Technology, Patna invites on-line bids on LUMPSUM basis in two bid system (Technical Bid and Financial Bid) from experienced contractors for the work “**Construction of Workshop Shed including all civil, electrical, mechanical, water supply, sanitary installation and external development works on LUMPSUM basis in IIT Patna campus at Bihta**”

1. The work is estimated to cost Rs.2, 14, 94,109/-This estimated cost is however merely a rough guide.
2. The eligibility of tenderer will correspond to the estimated cost put to tender (ECPT).
3. The time allowed for carrying out the work will be 15 (fifteen) months from the date of start as defined in schedule ‘F’ or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, as indicated in the bid document.
4. The site for the work is available with undulations and bushes.
5. Bid document consisting of **architectural drawings and structural drawings** for the Workshop Shed and other necessary documents including Standard General Conditions of Contract Form can be seen or downloaded at free of cost from website www.iitp.ac.in.
6. The Contractor, whose bid is accepted, will be required to furnish performance guarantee at 5% (five percent) of the accepted tendered amount within the period specified in Schedule "F". This guarantee shall be submitted in Performance Guarantee Bond of any scheduled bank in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.
7. Intending 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 is 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 charge consequent on any misunderstanding or otherwise shall be allowed in this regard. EMD shall be refunded after deposit of PBG.
8. The bidder shall be responsible for arranging all materials, tools & plants, water, electricity access, facilities for workers and all other services required or executing the work unless otherwise specifically provided for in this bid document. Submission of a bid by a bidder implies that he has read this notice and all other bid documents and has made himself aware of the scope and specifications of the

work to be done and of conditions and local conditions and other factors having a bearing on the execution of the work.

9. In case of difference of opinion between the contractor and the institute relating to any contractual matter, the decision of the Director (IITP) shall be final, conclusive and binding.
10. The Registrar, IIT, Patna does not bind himself to accept the lowest or any other tender and reserves to himself the authority to reject any or all the tenders received without assigning any reason thereof. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
11. Canvassing whether directly or indirectly, in connection with bid is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
12. The Registrar, IIT, Patna reserves the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.
13. The contractor shall not be permitted to bid for works in the IITP responsible for award and execution of contracts, in which his near relative is posted as Divisional Accountant or as an officer in any capacity from the grade of Executive Engineer and Junior Engineer (both inclusive). 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 IITP. Any breach of this condition by the contractor would result in cancelling his bid.
14. The bid for the works shall remain open for acceptance for a period of ninety (90) days from the date of opening of technical (eligibility) bid. If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modification in the terms and conditions of the bid which is not acceptable to the IITP, then the IITP shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the earnest money deposit. Further the bidders shall not be allowed to participate in the re-bidding process of the work.
15. This notice inviting Tender shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:
 - a. The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid document as uploaded at the time of invitation of bid and the rates quoted at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
16. The contractor shall execute all components of work also i.e. civil, electrical, plumbing, external development work and other allied components.
17. It will be obligatory on the part of the contractor to sign the bid documents for all components.

18. Tenders with any condition including that of conditional rebates in the tender document shall be rejected forthwith.
19. This bid is being invited on plinth area rate basis. The bidder must ensure to quote the plinth area rate both in figures and words (at appropriate place) at which he is willing to execute the work. In case of discrepancy in quoted rate of words and figures, the rate quoted in words shall be final & binding.
20. The contractor will give detailed execution program of the work which will form part of this agreement with the department.
21. Security Deposit @5% of the gross amount of bill shall be deducted from each running bill of the contractor till the sum deducted amounts to the figure of 3% of accepted tendered amount of the work.
22. A provision of Integrity Pact (IP) is mentioned in this bid document. In the pact it is mentioned that at the time of submission of bid, it shall be mandatory to sign the pact by the bidder failing which the bidder will stand disqualified from the bidding process and such bid would be summarily rejected.
23. The contract has to arrange their own water source. However, electricity shall be provided on demand from contractor as per the rule of IITP.

**Registrar,
IIT, Patna.**

5. Brief Description of work

Scope of Work, User Requirements and Technical specifications

SCOPE

IIT Patna proposes to construct Workshop Shed along with site development and infrastructure support for the building as detailed below in Table A. The plinth area and particulars are also indicated in the Table A. The execution will be done on the basis of drawings and schedule attached with the NIT. CPWD Specifications, relevant IS codes, latest National Building Code and other standard specifications will be followed in general except otherwise mentioned in bidding document. Samples of the materials of approved make or otherwise shall be got approved from the Engineer-in-charge before use in the work.

The drawings are provided as per existing workshop with minor changes as per requirement of IITP. The cost of labor, material, tools and plants and machinery required for execution of the whole project as per Layout plan & detailed design and drawings as provided to be approved after minor changes is within the scope of this work. The brief scope of work is as follows:

Scope of work:

BRIEF PARTICULARS OF THE WORK OF WORK SHOP (01 Nos.)

1. Area of work shop = 766.46 Sqm (as per drawings)
2. One nos. Workshops building have to be constructed for total plinth areas 766.46 sqm. It will be composite structure with structural steel trusses and steel column with required base plate and nut bolt covered with pre coated colored metal sheet roofing as per drawing.
3. All footing and column pedestal shall be as per approved drawings, concrete floor shall be hard Crete 52 mm thick glaze paneled flooring, wall should be 250 mm thick brick masonry between the pair of columns as per drawings
4. Main and side door will be Rolling shutters of approved make of appropriate size with all fittings and fixtures shall be provided as per attached architectural drawings.
5. Flush door shutter also be provided as per architectural drawings.
6. Ceiling fans to be provided. All windows shall be powder coated aluminum with glazing as per architectural drawings . All water supply and sanitary fittings will be as per approved drawings.
7. Plinth Level will be same as RL-60.94 and the formation level of the ground will be 60.34 (natural ground level is 60.15) from MSL or as per the decision of Engineer In Charge. Storey height will be same as existing Workshop.
8. Suitable nos of 3 Phase&1Phase Industrial Sockets, AC Sockets, 16A Power sockets and 6A sockets to be provided as per approved drawings as per department requirement.
9. Flooring: reinforced concrete floor:- suitable for heavy machines (presses) in addition to withstanding local load applied when jacking/moving of machines. Flooring should be 52 mm thick Hardenite flooring as per CPWD specifications.
10. Building framework:- RCC framework with roof truss for industrial building as per NBC 2016 guidelines – keeping provision for hanging area/lifting engines etc.
11. Roof trusses: Steel roof trusses have to be provided similar as present structure and as per approved drawing with suitable North light system.
12. Roof sheeting:- Double Skin Insulated Al-Zn alloy coated Roofing (concealed fastening system)
13. Movement and Access: A clear passage movement of machines during installation/transfer etc. should be provided. Passage may be towards the centre of the building and straight connected to the big shutter/doors in normal conditions, this will be designated passage also for human movement (generally bordered by yellow lines). Shutter door width and height should be such that mini trucks

- can enter for machine transfer or the booms of cranes can at least enter till the floor of the workshop. Conventional/ normal size gate for days-today human entry/exit.
14. Machinery and equipment: Sufficient space on either sides of the central passage for installation of machinery and equipment. Suitable electrical connections with earthing for machines.
 15. Lighting and ventilation: Proper lighting, sufficient air circulations/cross ventilation/industrial exhaust fans, ceiling fans, connections/provisions for wall mounting fans.
 16. Other facilities: Hand wash station, wash basin on both ends of workshop building; Toilets (His and Her), Drinking water station satisfying the minimum accessible standards.
 17. Door frame and shutters:- Rolling shutters and Flush Doors are required.
 18. All plumbing and sanitary lines exposed on outer face of wall shall be covered with GRC Jali of approved design & make. Adequate structural support system and provision for maintenance of services shall also be provided.
 19. As per the mentioned minimum acceptable specification and scope of work as mentioned on Pg 17 to Pg 21 of the contract, below mentioned brief particulars of the work and requirement of IITP.
 20. As no mezzanine floor is required as mentioned in the drawings, the architectural and structural drawings shall be modified keeping the same into consideration.
 21. All exposed electric lines on the walls and steel columns shall be covered with suitable material like ACP for aesthetic purpose.
 22. Any other minor modification as required necessarily for smooth and efficient functioning of the building.
 23. The ramp, railings, tactile work, water stations shall be constructed as per the CPWD Manual of accessible built free environment.
 24. As no mezzanine floor is to be developed, the water supply tank for the shed shall be provided at suitable height with suitable MS stand for PVC tanks of required capacity, thus omitting/discarding the R.C.C water tank.
 25. All plumbing and sanitary lines exposed on outer face of wall shall be covered with GRC Jali of approved design & make. Adequate structural support system and provision for maintenance of services shall also be provided
 26. The internal rooms to be provided inside the workshop as per the architectural drawings provided shall have false ceiling works.
 27. The rate quoted by the bidder shall be for the entire work as per the attached drawings , specifications and the above mentioned changes over and above the provided drawings.

TABLE A: BUILDING

Sl. No.	Building Names	No. of Units	No. of Blocks	No. of Floors	Ground Cover of All Blocks in sqm	Built up Minimum plinth area in sqm
1.	Workshop	1	1	G.F	766.46	766.46

Note:

1. For calculation of plinth area, rules for working out the plinth area from plans as given in the Attached Annexure A shall be followed.
2. Plinth area shall not include shafts open to sky. However the shafts/lift wells covered at top shall be counted at one floor level only.
3. Schematic layout plan, drawings of buildings

TABLE B: ELECTRICAL WORK

	Electrical	
1.	Internal & External Electrifications	Supply, installation, testing and commissioning of Internal LED light Fittings, Exhaust fan, Ceiling fan, Switch board, LT Panels, 3Phase & 1Phase Industrial Sockets, AC Sockets, 16A & 5A sockets Energy meters, Cable tray, Raceway, Lightning arrester, LED Area lighting for external site development, LED Street light on octagonal double bracketed GI poles alongwith road work.
2.	Fire Fighting, Fire Detection, Fire Alarm System	Supply, installation, testing and commissioning of Fire Fighting, Fire detection, Fire alarm system as per the requirement of NBC 2016 with amendments, updated BIS codes, Fire bye-laws of Govt. of Bihar and CPWD specifications
3.	Sub-station equipments & External Electrical Services	Supply, installation, testing and commissioning of power supply to Workshop which includes Essential and Non-essential LT Panel, Cables to all LT Panels including spare cable, Feeder Panels as per specifications given.
4.	Air-conditioning	Supply, installation, testing and commissioning of 5star inverter type Air conditioning system.
5.	Other Items which are not mentioned above but are essential considering functional requirements and according to modern concept of building	

Provision of Fixtures:-

- (i) For general lighting in Work shop by high bay LED fittings and in office area LED recessed fittings shall be provided.
- (ii) 03 phase industrial type 32 /63 Amp rating power outlet at interval of approx. 5 meter on wall surface in flush pattern. Copper armored cable on Raceway/Cable tray to be provided.
- (iii) 15/16 Amp. 6 pin power outlets at an interval of 5 meter on wall surface in flush pattern.
- (iv) 5 Amp power outlets at an interval of 5 meter on wall surface in flush pattern.
- (v) 1400 mm sweep Ceiling fan with extended down rod: no. as per norms.
- (vi) For mechanical ventilation axial flow fans minimum 5000 CMH with emergency stop/start facility: no. as per air change required(minimum numbers per work shop=06)
- (vii) Power feeding to each industrial socket shall be done through armored copper cable.
- (viii) Exhaust fan of 305 mm sweep (Metallic) with louvers in each toilet.
- (ix) In office located inside the workshop 2 nos computer outlets comprising of 1 no. 15 amp switch and 3 nos 5 amps sockets shall be provided.
- (x) Near each computer outlet two numbers RJ 45 socket shall be provided. Entire wiring for networking and telephones along with all necessary components required to make the system

functional with the latest technology is in the scope of work. The system shall be got approved by the Engineer-in-charge.

TABLE C: SITE DEVELOPMENT WORKS

1.	Roads	
	Approach road to the proposed building for construction	From existing road to each door/entry of the Workshop
2.	Storm water drains, sewer line, Rain water harvesting & STP	construction of storm water drains, sewer line, rain water harvesting in the external area around the buildings for the area as indicated in Table-A given below is considered for construction i/c connection to the trunk sewer line.
3.	External water supply:	Providing and laying water supply lines around the building and connection to existing main water line which is connected to existing underground water tank.
4.	Landscape and Horticulture:	construction of Landscape works (both hard & soft) in and around the buildings, roads & services in the scope of this tender. the scope of construction & maintenance will be limited to the external area equal as per the Table-A as per dwgs
5.	Procurement and installation of all external signage's.	
6.	Other Items which are not mentioned above but are essential considering functional requirements is included	

TABLE A1

Sl No.	Name of building	Minimum area to be considered for development and landscaping around the building /road excluding the footprint of the building (in sqm)
1.	Workshop	500

Note:

1. All works has to be executed as per specifications and drawings provided in the bid document, CPWD

Specifications Vol-I & Vol.II and National Building Codes 2016(in case of difference if any, stringent / higher specification of the two shall be followed. In absence of CPWD Specification, IS Codes, MoRTH Specifications, National Building Code 2016, Specifications, PWD Govt. of Bihar Specifications or sound engineering practices shall be adopted as per order of precedence defined in the contract.

2. In case, some of items are missing in the scope of work or specifications in the bidding documents same shall be taken from the specification mentioned in similar type of items mentioned for similar type of buildings in the scope of work or shall be executed as given in the CPWD Specifications, NBC-2016, IS Codes or according to sound engineering practices so as to make the building including related services fully functional. No claim what so ever may be entertained at later stage. All cost of providing and making buildings with services , landscape and horticulture works fully complete in all aspect unless specifically mentioned in the contract document and making buildings with services fully functional are included in the cost tendered for this work.

Brief Description of activities:-

Planning

1. The contractor has to submit with work plan, quality assurance plan, material schedule, documents and contact details of Contractor's engineer before start of the work at site.

MINIMUM ACCEPTABLE SPECIFICATIONS/SCHEDULE OF ITEMS FOR WORKSHOP BUILDING SUPERCEEDING THE PROVIDED ARCHITECTURAL AND STRUCTURAL DRAWINGS

Sl. No.	Items of Work	Specifications
1	Foundation & Plinth	As per Structural design & drawings attached.
1.1	Foundation & Super structure	As per drawings
1.2	Plinth Filling : a) Sand filling under floor: b) Concrete under floor/ footings :	With Local coarse sand 150mm thick 75 mm thick lean concrete below footing in M10. 100 mm thick RCC of grade M20 shall be laid under flooring work in ground floors with 8 mm dia @ 300 mm c/c both ways
1.3	Railing in staircase/ Balcony railing	SS grade 304, 50 mm dia handrail with SS baluster as per approved drawing
1.4	Brick Work	All external walls will be full brick thick with Clay/ Fly ash brick and in internal wall if design permits half brick may be provided wherever required .
2	Door, windows and shutters	
2.1	Door frame :	All doors of the to have Powder coated aluminum section (heavy) powder coated of minimum 50 micron thickness of ISI marked quality. All fittings will be aluminum. Double action hydraulic floor spring of approved brand conforming to IS: 6315 with double spring mechanism and door weight upto 125 kg along with all fittings to be provided. Glazing in the external doors will be as per sl. no. 12. In Bathroom, UPVC extruded frame sections with wall thickness min. 2.0mm or as per dwg
2.2	Door Shutters	All doors will be powder coated aluminium section

		(heavy)35 mm thick IS marked glazed shutters withetchning film of approved pattern. Internal rooms where there is a security requirement factory made flush door shutter 35mm thick non decorative. Glazing in the external doors will be as per sl. no. 3.1, 35mm thick exterior grade UPVC flush door shutter in Bath/WC as per CPWD specification 2019
2.3	Door fittings	(i) Mortice latch & lock with 7 levers of approved make, SS 316 handle of standard make shall be provided in all shutters. (ii) Powder coated aluminum Tower bolts (250x100mm), door stopper, door stay etc.
	Hydraulic Door Closer	As per IS: 3564 for door weight up to 80 kg and width up to 1000 mm
3	Window	
3.1	Windows & Ventilators with frame	All windows shall be of Powder coated aluminum Z section (heavy) powder coated of minimum 50 micron thickness of ISI marked quality. All fittings will be aluminum. Windows will be partly fixed & partly openable windows shutter will be provided with accessories such as locking arrangement friction hinges, handles etc All strong rooms & stores will also be provided with M.S. grill..
	Glazing of Windows and its opening	Double glazed unit with low Emission value, heat, reflecting glass tempered outside and plain tempered glass inside of approved Make approved colour and quality with suitable locking arrangement will be installed. Opening of windows should be sufficient enough as per ECBC norms for day light during day time. The properties of glass should meet the ECBC & NBC 2016 requirement or as per dwgs
	Windows Sill & Window Jambs	18mm thick window sill with nosing with granite of suitable colour. All edges to be machine moulded
4.	FLOORING :	
4.1	Flooring	For Workshop area: Hard crete flooring 53 mm thick For toilet area: ceramic tile
4.2	Skirting	Specifications for materials of skirting will be same as for flooring with matching joint pattern. 150 mm in rooms and 1000 in Corridors
4.3	a) Dado :	Toilet - Glazed/digital/coloured rectified ceramic tiles of size not less than 600x300 mm up to 2100 mm height.
	b)Staircase: Landing, Tread and riser	Single length 18mm thick Granite flooring with suitable moulding fixed with dado/skirting up to 1000 mm height.The riser height of staircase should not be more than 150 mm and tread width not be less than 250mm
	c) Fully exposed columns inside the building	Fully exposed steel columns inside the buildings shall be covered with ACP Panel sheet as per approval

5	ROOFING	
	Rain Water Pipes :	All the RWP pipes including fittings shall be PVC pipes
6	FINISHING :	
6.1	Plastering on walls (External) :	Cement plaster shall be provided as per CPWD specification. Walls treated with polymer modified exterior grade wall putty white cement based putty. Necessary grooves shall be provided at the junction of Dissimilar materials and shall be neatly finished. Necessary drip course shall be provided
	Plastering on walls (Internal):	Cement plaster shall be provided as per CPWD specification. Internal surface shall be made smooth with interior wall putty before painting work Necessary grooves shall be provided at the junction of dissimilar materials and shall be neatly finished
6.2	Internal finishing:	Internal walls – Two or more coats acrylic distemper
6.3	External finishing:	External – Two or more coats of premium Acrylic Smooth weather proof exterior paint.
6.4	Primer :	As per CPWD Specification for wood work and steel work
6.5	Painting on wood / steel work :	Synthetic enamel paint.
7	MISCELLANEOUS :	
7.1	Plinth Protection	As per CPWD specifications
7.2	Footpath & Open Paved area	60 mm thick factory made ISI marked cement concrete Interlocking paver block of M30 grade as per Arch drawing and approved development plan (over 100 mm thick sub-base with cement concrete M10)
8	INTERNAL SANITARY WATER SUPPLY INSTALLATIONS :	
8.1	W.C. Pan	Floor mounted EWC with cistern (single piece) in 90% of toilet and IWC in rest of WC cubicles with wall hung flushing cistern as per Architectural Drawings and as per CPWD Specification
	Urinals Sensor	Sensor operated water saving half stalls urinals with Granite partition
	Health faucet	SS faucet of approved make shall be provided in all WC
	Wash basin	Counter sunk oval shape wash basin of size not less than 550x445x200mm to be provided in counter /platform of 18 mm thick machine moulded granite slab over RCC slab in all rooms and common toilet. Stainless steel Bottle trap must be provided in each wash basin. However in staff toilet normal wash basin may be provided.
	Mirror Full	Full size /length float mirror over wash basin slab has to be provided with PVC base except in staff toilet where mirror of 600mmx450mm as per the CPWD. Specification shall be provided. Glass

		shelves of approved make shall be provided in the corner of the bathroom. In ladies toilet one mirror of appropriate size for viewing full height shall be provided at appropriate location.
	Shelf	At least one granite shelf of size not less than 450mmx1200mm to be provided near the entry of common toilets for keeping belongings
8.2	Soil & waste pipes fittings	All the sanitary pipes including fittings shall be of PVC make of approved brand
8.3	House Manhole	Brick masonry with brick of class designation 75 of size 90x80x45cm with cast iron light duty cover and frame.
8.4	Pipe between house manhole & service manhole	HDPE pipes of PN-8 shall be provided for smooth /healthy drainage system with proper slope as per approved design
8.5	Water supply line :	
	External pipe line upto 50mm	GI pipes as per approved plumbing drawing. Gun metal gate valve with CI wheel of approved quality
	Internal piping – Exposed on wall	GI pipes as per approved plumbing drawing. Gun metal gate valve with CI wheel of approved quality.
	Internal piping & fittings– Concealed work	G.I pipe as per drawings and CPWD specifications
8.7	Painting of CI Pipes/PVC pipes a) Exposed on buildings	Synthetic enamel paint
8.8	Fittings :	CP brass bib cocks, stop cocks, pillar cocks, and shower rose etc. – 15/20mm. All CP fitting shall be single lever (Quarter turn) and other accessories of the same series/ class as approved. Wall mixture and basin mixture, shower rose. Angle valve and other fitting should be in CP brass of approved quality and of same series, SS gratings, towel rack, mirror above the basin and 6 robe hooks are to be provided. The product shall be at least two level above the basic model
8.9	Water supply Tank	One 5000 litres PVC tanks of adequate capacity with suitable MS stand to provide the required head.
9	EXTERNAL DEVELOPMENT (WATER SUPPLY)	
9.1	Pipe	GI pipes. Ductile iron pipe of class K9 as per approved drawings
9.2	Fittings	Standard fittings (Heavy class)
9.3	Pig Lead	Pig lead of approved quality
9.4	Sluice Valve	C.I. sluice valve (with cap) complete with bolts & nuts, rubber insertion etc.
9.5	Chambers for : a) Sluice Valve b) Fire Hydrant	Brick masonry chambers of appropriate size with C.I. surface box complete as per specification

9.6	Thrust Blocks	CC 1:2:4 (1 Cement : 2 Coarse sand : 4 graded stone agg. 20 mm nominal size)
10	SEWERAGE /DRAINAGE	
10.1	Pipe :	Internal Pipes for sewerage purpose shall be of PVC type and for connection of sewerage to the manhole outside the building shall be of HDPE PN 8
10.2	a) Rectangular Manhole: Inside size 90cm x 80 cm with depth upto 45 cm. Inside 120 cm x 90 cm with depth 45 cm to 90 cm. b) Circular Manholes exceeding 0.90 m depth	Brick masonry manhole with CI covers & frame light duty as per CPWD specification 20019. Brick masonry manhole with CI covers & frame heavy duty as per CPWD specification 2009. Manholes of required dia. as per depth with brick wall (with Sewer Bricks) as per CPWD specification and corresponding DSR 2021 items with SFRC frame and covers HD-20. In sub-soil or adverse soil conditions, manholes & encasing pipes shall be as per approved credible structural design to avoid sinking and settlement of lines/manholes. Note: Orange colour safety foot rest of minimum 16mm thick plastic encapsulated complete as per IS : 10910
11	External Glazing work:-	DGU Glass panes of specified thickness properties as approved shall be provided in all glazed doors and windows as per ECBC and NBC 2016. Front area of building shall be fitted with Structural glazing shall be provided as per approved architectural drawings.
12	False ceiling:-	false ceiling in toilet block shall be silhouette grid ceiling with 595mmx595mm calcium silicate of approved make & pattern shall be provided
13	Approach Road	Approach road from main road will be C.C. pavement 200 mm thick M-30 PCC laid over 150mm thick GSB with dowel bars as per MORTH specifications (fifth edition).

NOTE:

1. The work shall be executed as per the drawings after incorporating minor modifications as required and approved by the IITP or the Committee constituted for this purpose by the Director, IIT Patna. The work described in this bid document is considered to be single responsibility contract on LUMPSUM basis that includes minor modifications in drawings, construction and transfer of the fully functional building to institute as per the required parameters and specifications laid down in the bid document.
2. Bidders' quote shall cover all the contractor's obligations mentioned therein or to be reasonably inferred from the bidding documents in respect of overall construction including procurement, supply, construction, installation, testing, commissioning and completion of the building in all respects.

3. The work to be carried out under the contract shall, except as otherwise provided in bid document, include for all labour, materials, tools, plants, equipment and transport which may be required in preparation of and for entire execution and completion of the work. The descriptions of work given in the bid document shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, hoisting, setting, fitting & fixing in position and all other labours necessary for the entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles of engineering.
4. The work also includes under the contractor's responsibilities all requirements for site cleaning/up-keep, Site clearance/site developments, anti-termite treatment, minor required changes in the provided drawings, approval of same by IITP, procurement & construction, pre-commissioning, commissioning and completion of building.
5. Description of building works and services given in various Parts of bid document is in brief. These are deemed to be amplified and read in conjunction with special conditions, particular specifications, specifications for materials & workmanship and conditions in relevant CPWD specification of works, Delhi Schedule of Rates and contract drawings. These documents are taken as mutually explanatory to one another.
6. The term “CONTRACT DRAWINGS” includes all sets of drawings attached in NIT except some minor modifications jointly agreed

MINIMUM ACCEPTABLE SPECIFICATIONS FOR ELECTRICAL ITEMS

<p>Specifications to be followed for execution of Electrical works</p>	<p>Electrical work:</p> <ol style="list-style-type: none"> 1. CPWD General Specification for Electrical Works Part I Internal – 2013 . 2. CPWD General Specification for Electrical Works Part IV Substation -2013 . 3. CPWD General Specification for Electrical Works Part VIII Gas Based Fire Extinguishing System – 2013 4. General Specification for Heating Ventilation & Air-Conditioning-2004 .. <p>All above specifications shall be applicable with corrections slips up to the last date of submission/ uploading of bid.</p>
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7. The term “SUPPLY & CONSTRUCTION” comprises time –oriented supplying, staking and safe storage of all building materials, components, Tools & Plants, machineries, equipment etc as required in complete time bound construction of Workshop Shed including civil, electrical, sanitary, water supply, drainage, external development & other allied works in accordance to specifications, approved drawings & designs and as per the Directions of Engineer-in-charge.
8. The term “TESTING & COMMISSIONING” comprises testing & trial run of all machines & equipment at full load and successful commission including rectification of defects as they come to the notice and/or as directed by the Engineer in-Charge.
9. PAYMENTS: The bidder shall quote a single amount on plinth area rate basis in words & in figures for complete construction of Workshop Shed along with all services as mentioned in the bid document. The bidder shall be entitled to get the running payments in accordance to the payment schedule as attached at Schedule-A. However, all running payments shall be treated as advance payment only against the final bill payment.
10. The payment schedule attached with the bid document is the stages of works, upon completion of which the payment may be released to contractor. Since all the items to be carried out are not described in such stages, the Engineer-in-charge will ensure the completion of all inter related works associated with the respective stages before releasing the payment against any particular stage so that overall & absolute completion of work takes place corresponding to that stage of work.
11. In the event of non-completion of any inter related work, to any stage of payment but not clearly mentioned in the payment schedule and appears essential to be completed with the respective stage of work, in the view of Engineer-in-charge the demand of payment by the contractor may be refused/ postponed by the Engineer-in-charge till his satisfaction of absolute completion of that stage of work.
12. The Engineer-in-charge on demand of contractor may consider the interim release of payment between any two stages on pro-rata basis if found necessary due to incompleteness of any stage with genuine reasons provided similar amount of work has been secured against any other stage. The Engineer in charge shall clearly mention the quantum and respective financial ingredient of work not done and of proportionate work done against which such sums are allowed to be released in favor of contractor. The reasons of non-completion of respective work shall also be recorded by Engineer-in-charge while allowing the payments. Such interim payments shall only be resorted to on the prevalence of any unprecedented situation.
13. On issue of approved corrected drawings from the Engineer-in-charge, the contractor will start the work at site.
14. The works carried out in accordance with approved drawings only, shall be considered acceptable and taken into account for making payment.
15. The execution of work shall be monitored by EIC. The quality of work & progress of work shall be monitored and on their recommendations of satisfactory work only, the payment shall be processed.

6. PARTICULAR SPECIFICATIONS

(A) GENERAL

1. The work in general shall be executed as per the drawings and description of the items, specifications attached, CPWD specifications 2019 Vol-I &II for Civil Works and CPWD specifications for Electrical works-2016 (part-I) with amendments /correction slips issued up to previous date of submission of bid
2. In case of any variation between different applicable specifications, the following order of precedence will be followed:
 - a. Particular specification and contract drawings
 - b. Additional conditions.
 - c. Brief description of works.
 - d. CPWD specifications.
 - e. Indian standard specifications of B.I.S.
 - f. Contract Drawings.
 - g. Decision of Engineer-in-charge.
3. The work shall be executed and measured as per metric units given in the schedule of quantities, drawings etc.(F.P.S. units wherever indicated are for guidance only).
4. The following modification to the above specifications and some additional specifications shall however apply.

All stone aggregate and stone ballast shall be of hard stone variety to be obtained from approved quarries at **DOMCHANCH, Kedarma/Pakuror** any other source as approved by the Engineer in charge. Sand to be used for cement concrete work, mortar for masonry and plaster work **SONE/KIUL River**. Sand obtained from other sources shall be got approved from the Engineer in charge. The same shall consist of hard siliceous material. It shall be clean sand.

The term Yamuna sand, if specified in the item shall be read as SONE River sand. The grading of sand shall be within the limits of grading zone IV or V specified in Section 3 'Mortars'.
5. Wherever any reference to any Indian Standard Specification occurs in the documents related to this contract, the same shall be inclusive of all amendments issued there to or revisions thereof, if any, upto the previous date of submission of bid.
6. All field tests prior to, during or after the execution of work as specified in CPWD Specifications shall have to carried out by the contractor and work shall only be accepted after the success of such tests & satisfaction of Engineer-in-charge.
7. The contractor, for the compliance of this condition shall maintain a test register in accordance with the contract clauses, in which the complete details of tests, whether failed or passed, shall be entered with date & time and got signature by the Engineer-in-charge.
8. **All Lab test should be done through NABL accredited laboratory only and that too after obtaining prior approval of engineer-in-charge.**
9. **Quality assurance plan in brief is being attached for hold points**

[B] CIVIL ITEMS

10. CONDITION FOR CEMENT

The contractor shall procure PPC 43 grade (conforming to 1489) as required in the work, from manufacturers of cement, having a production capacity of one million tonnes or more, indicated in list of approved products with the bid document. The bidders may also submit a list of names of cement manufacturers which they propose to use in the work. IITP reserves right to accept or reject name(s) of cement manufacture(s) which the bidder proposes to use in the work. No change in the tendered rates will be accepted if the IITP does not accept the list of cement manufactures, given by the bidder, fully or partially.

- a. The cement brought to the site for execution of work shall be in bags bearing manufacturer's name & ISI marking. Weight of cement in each bag shall be 50 kg. Samples of cement arranged by the contractor shall be taken by the Engineer- in- Charge and got tested in accordance with provisions of relevant BIS codes. In case the test results indicate that the cement arranged by the contractor does not conform to the relevant BIS codes, the same shall stand rejected and it shall be removed from the site by the contractor at his own cost within 7 days of written order from the Engineer-in- Charge to do so.
- b. The Cement shall be brought at site in bulk supply of approximately 50 tons or as decided by the Engineer-in-Charge.
- c. The cement godown, of capacity to store a minimum 2000 bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made. Cement bags shall be stored as per sketch (which is only indicative and actual size will depend on the site requirements) at page 23 of CPWD specification 2019 Vol.-I with weatherproof roof sand walls. The godown shall be provided with a single door.
- d. Double locks provision shall be made to the door of cement go down. The keys of the one lock shall remain with the Engineer-in-Charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godowns so that the cement is removed from the godowns according to the daily requirement with the knowledge of both the parties and proper account maintained in standard Proforma. The contractor shall facilitate the inspection of the cement godowns by the Engineer in- Charge or his authorized representative anytime.
- e. The cement shall be got tested by Engineer-in-charge and shall be used on work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories. The cost of tests shall be borne by the contractor/ IITP in the manner indicated below:-
 - (i) By the contractor, if results show that the cement does not conform to relevant BIS codes.
 - (ii) By the IITP, if the results show that the cement conforms to relevant BIS codes.
- f. Minimum Wet curing period shall be 14 days or its equivalent. In case of PPC, suitable modification in de-shuttering time etc. shall be done if need be as per specifications and standards and as directed by Engineer-in-charge and nothing extra shall be payable on this account.
- g. Till the time, BIS makes it mandatory to print the percentage of fly ash on each bag of cement, the certificate from the PPC manufacturer indicating the same shall be obtained and permission obtained from Engineer-in-Charge before use of such cements in works .Including variations, recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made.

- h. Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-Charge.
- i. Damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from Engineer-in-Charge. If he does not do so within 3 days of receipt of such notice, the Engineer-in-Charge shall get it removed at the cost of the contractor.

11. CONDITIONS FOR STEEL IN RCC WORKS:

- a. The contractor shall procure TMT bars of 550D grade from primary producers such as SAIL, TISCO, RINL or as approved by the Engineer-in-charge. The TMT bars procured from primary producers shall conform to manufacture's specification.
 - (i) Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications or BIS codal requirements, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week time or written orders from the Engineer-in Charge to do so.
 - (ii) The steel reinforcement bars shall be brought to the site in bulk supply of 10 tonnes or more or as decided by the Engineer-in-Charge along with manufacturer test certificate for each lot.
 - (iii) The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking. The reinforcement bars brought to the site of work shall be stored as per CPWD specification 2019.
 - (iv) For checking nominal mass, tensile strength, bend test, re-bend test etc. specimens of sufficient length shall be cut from each size of the bar at random, and at frequency not less than specified below:
 - (a) Under 10mm dia : One sample for each 25 tonnes or part thereof.
 - (b) 10mm to 16mm dia : One sample for each 35 tonne or part thereof.
 - (c) Over 16mm dia : One sample for each 45 tonne or part thereof.

Frequency of the test to be done as mentioned above but not less than CPWD norms.

- (v) The contractor shall supply free of charge the steel required for testing including its sampling, packing and transportation to testing laboratories. The cost of tests shall be borne by the contractor/Department in the manner indicated as below:
 - (a) By the contractor, if results show that the cement does not conform to relevant BIS codes.
 - (b) By the Department, if the results show that the cement conforms to relevant BIS codes.

b. The actual issue and consumption of steel on work shall be regulated and proper account maintained as provided in the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made

12. **R.C.CWORK:**

a. **CENTERING AND SHUTTERING FOR RCCWORK**

The concrete surface shall be free from honey combine, off sets, superfluous mortar, cement slurry and foreign matter. The formwork shall be assembled in such a way as to facilitate removal of their parts in proper sequence without any damage to the exposed cement concrete surfaces and corners etc. The contractor shall keep skilled staff for special care and supervision to check the form work and concreting so that every member is made true its size, shape, level and alignment so that it does not result in any deformation, snag, buldges etc. The contractor shall also take suitable precautionary measure to prevent breaking and chipping of corners and edges of completed work until the building is handed over. The size of shuttering plates for slabs shall not be less than 0.6 m x 0.9 m in general. The shuttering plates shall rest over telescopic steel props only. However, contractor has to provide tape to seal the joint properly to get smooth surface. Further shuttering shall be of such quality that there are no undulations and surfaces will be fairly even and no extra thick ceiling plaster shall be permitted to make the surface even.

b. **RCC Work (Ready Mix Concrete to be used).**

The RCC work shall be done with Design Mix concrete unless otherwise specified in the contract. For the nominal mix in RCC, CPWD Specification shall be followed. The Design Mix Concrete will be designed based on the principles given in IS:456, 10262 and SP 23. The contractor shall design mixes for each class of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting requirements specified. The cement shall be actually weighed as presumption of each bag having 50 kg shall not be allowed. In case of use of admixture, the mix shall be designed with these ingredients as well. The specification mentioned herein below shall be followed for Design Mix Concrete.

c. **Ingredients:-**

Coarse Aggregate:-As per CPWD Specifications

Fine Aggregate:-As per CPWD Specifications

Water:- It shall conform to requirements laid down in IS 456-2000 and CPWD specifications.

Admixture:- Wherever required, admixtures of approved quality shall be mixed with concrete to achieve the desired workability within specified water cement ratio. The admixture shall conform to IS:9103. The total amount of chlorides in the admixture mixed concrete shall also satisfy the requirements of IS : 456- 2000.

The Contractor shall not be paid anything extra for admixture required for achieving desired workability without any change in specified water cement ratio for RCC/CC work.

d. The concrete mix will be designed for minimum workability as per specified in para 7 of IS-456-2000 Workability of Concrete (Unless otherwise specified elsewhere or as decided by Engineer in charge)

Placing Conditions	Degree of Workability	Slump (mm)
(1)	(2)	(3)
Lightly reinforced sections in slabs, beams, walls, columns	Low	25-75

Heavily reinforced section in slabs, beams, walls, columns	Medium	50-100
Pumped Concrete	Medium	125-150

- e. In the designation of concrete mix letter M refers to the mix and the number to the specified characteristic compressive strength of 15 cm – Cube at 28 days expressed in N/mm²
- f. It is specifically highlighted that in addition to the above requirements the maximum cement content for any grade shall be limited to 450 kg / cubic metre.
- g. The minimum / maximum cement content for design mix concrete shall be maintained as per the quantity mentioned above. Even in the case where the quantity of cement required is higher than the minimum specified above to achieve desired strength based on an approved mix design, nothing extra shall become payable to the contractor.
- h. The concrete design mix with or without admixture will be carried out by the contractor through Government Engineering Colleges or NABL accredited Laboratories but only after taking prior approval of Engineer-in-charge.
- i. The various ingredients for mix design / laboratory tests shall be sent to the lab / test houses through the Engineer in charge immediately after award of work and the samples of such aggregate sent shall be preserved at site by the department. The admixture if used by contractor shall be at his own cost without any extra payment.
- j. The contractor shall submit the mix design report from any of above approved laboratories for approval of Engineer- in- charge within 30 days from the date of issue or letter of acceptance of the tender. No concreting shall be done until the mix design is approved.
- k. In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised laboratory mix design report conducted at laboratory established at site shall be submitted by the contractor as per the direction of the Engineer-in-charge.

l. APPROVAL OF DESIGN MIX

The mix design for a specified grade of concrete shall be done for a target mean compressive strength $T_{ck} = F_{ck} + 1.65s$

Where F_{ck} = Characteristic Compressive Strength at 28 days

s = Standard deviation which depends on degree of quality control.

The degree of quality control for this work is “good” for which the standard deviation (s) obtained for different grades of concrete shall be as follows:-

GRADE OF CONCRETE	FOR ‘GOOD’ QUALITY OF CONTROL
M- 25	5.0
M- 30	6.0

Out of the six specimen of each set three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28days.

CHARGES FOR DESIGN MIX

All cost of mix designing and testing connected there with including charges payable to the laboratory shall be borne by the contractor.

m. PREPARATION OF MIXES AS PER APPROVED DESIGN MIX AND CONDUCTING CONFIRMATORY TEST AT FIELD LAB.

For each mix, a set of six cubes shall be made from each of the three consecutive batches. Three cubes form each set of six shall be tested at age of 7 days and remaining three cubes at age of 28 days. The cubes shall be made, cured, transported and tested strictly in accordance with specifications. The average strength of nine cubes at age of 28 days shall exceed the specified target mean strength for which design mix has been approved, the evaluation of test results will be done as per IS : 456.

n. WORK STRENGTH TEST

TESTSPECIMEN

Work strength test shall be conducted in accordance with IS: 516 on random sampling. Each test shall be conducted on six specimen, three of which shall be tested at 7 days and remaining three at 28 days. Additional samples shall be prepared, if required, as per direction of Engineer in charge for testing samples cured by accelerated method as described in IS: 9103.

TEST RESULTS OF SAMPLE

The test results of the sample shall be the average of the strength of three specimen. The individual variation shall not be more than +- 15 percent of the average. If more, the test results of the sample are invalid. 90% of the total tests shall be done at the laboratory established at site by the contractor and remaining 10% in the outside laboratory as directed by the Engineer -in-charge.

STANDARD FOR ACCEPTANCE

Standard of acceptance shall be same as specified in clause 16 of IS 456-2000.

In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specification, the level of top surface of RCC shall be accordingly adjusted at the time of its centering, shuttering and casting for which nothing extra shall be paid to the contractor.

In case of rejection of concrete on account of unacceptable compressive strength, governed by para 'Standard of Acceptance' as above, the work for which samples have failed shall be redone at the cost of contractors, However the Engineer- in-charge may order for additional tests (like cutting cores, ultrasonic pulse velocity test, load test on structure or part of structure etc) to be carried out at the cost of contractor to ascertain if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of the set tests. The contractor shall take remedial measures necessary to retain the structure as approved by the Engineer in charge without any extra cost. However, for payment, the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates shall be regulated in accordance with para 5.14.13 of revised CPWD specification 2019 for C.M, C.C.and R.C.C.works.

13. PRECONSTRUCTION ANTITERMITE CHEMICAL TREATMENT

Pre-constructional anti-termite chemical treatment shall be done as per CPWD

Specifications as in accordance to following:

- a. Anti-termite treatment shall be got done through approved specialist agency holding valid license as per clause 13 of insecticides Act 1968. Persons employed to do the anti-termite treatment in this work shall be qualified as per rule 10 of the rules framed under the inspection rule 1971. The specialist agency may be any one from list approved by Engineer-in-charge.
- b. Chemical Chloropyriphos shall be as per IS: 8944-2005: Specification for chloropyriphos EC. The chemical shall be brought in original sealed containers & should be purchased from approved manufacturers or their authorized agents and any other firm manufacturing ISI marked chemical after taking written approval from Engineer-in-charge. The Contractor shall submit test certificates of the chemical from manufacturers. The contractor shall be required to get the chemical tested from any laboratory approved by Engineer-in-charge for its properties and the cost of chemical for testing.
- c. Concentration of the chemical as emulsifiable concentration is indicated on the sealed containers. For obtaining specified concentration, chemical shall be diluted with water in the required quantity before it is used. Graduated containers shall be used for the dilution of the chemical.

14. ALUMINUM WORK

Aluminum work shall be got executed from specialized agency. The specialized agency for the aluminum work shall be got approved from the Engineer-in-Charge, well before actual commencement of the item of work. Necessary performance certificates in respect of agencies proposed to be engaged shall be submitted within 30 days from the date of issue of acceptance letter to substantiate technical capability and experience of the agency for prior approval of the Engineer-in-charge.

A. Specification for Aluminum Door, Window, Ventilator

(i) Extent and Intent:

The work shall be carried out through an approved specialist contractor who shall furnish all materials, labour, accessories equipment tool & plant, incidental. required for providing and installing anodized aluminum door, windows, claddings, louvers and other items as called for on the drawings. The drawings and specifications cover the major requirement only. The supplying of additional fastenings, accessory features and mentioned specifically herein but which are necessary to make a complete installation shall be a part of the contract.

(ii) General:

Aluminum doors, windows etc. shall be of sizes, section detail as shown on the drawings. The details shown on the drawings indicate generally the sizes of the components parts and general standards. These may be varied slightly to suit the standard adopted by the manufacture. Before proceeding with any manufacturing, the contractor shall prepare and submit complete manufacturing and installation drawings for approval of Engineer-in- Charge and no work shall be performed until the approval of these drawings is obtained.

(iii) Shop Drawings:

The contractor shall submit the shop drawings of doors, windows louvers cladding and other aluminum work, based on architectural drawings to Engineer-in-Charge for this approval. The drawings shall show full size sections of door, window etc. thickness of metal (i.e wall thickness) details of construction, sub frame / rough ground profile anchoring details, hardware as well as connection of windows doors, and other metal work to adjacent work. Samples of all joints and methods of fastening and joining shall be submitted to the Engineer-in-Charge for approval well in advance of commencing the work.

(iv) Samples:

Samples of doors, windows, louvers etc shall be fabricated assembled and submitted to the Engineer- in -Charge for his approval. They shall be sizes, types etc. as decided by Engineer- in-Charge. All samples shall be provided at the cost of the contractor.

(v) Sections:

Sections of Aluminum doors and windows shall be fabricated from extruded section of profiles thickness not less **2.50 mm** except beadings and clips. The sections shall be extruded by the manufacturers approved by the Engineer-in-Charge. The aluminum extruded section shall conform to IS designation 63400WP (HV9WPolddesignation) with chemical composition and technical properties as per IS: 733 and 1285. The permissible dimensional tolerance of the extruded sections shall be such as not to impair the proper and smooth function / operation and appearance of doors and windows.

(vi) Fabrications:

Doors, window etc. shall be fabricated to sizes as shown at factory and shall be of section, sizes combinations and details as shown in the Architectural drawings, all doors, windows etc. shall have mechanical joints. The joints shall be designed to withstand a wind load of 150 kgs.Per sqm. The design shall also ensure that the maximum deflection of any member shall accurately machine and fitted to form hairline joints prior to assembly. The join and

accessories such as cleats brackets, etc. shall be of such materials as not to cause any bi-metallic action, the design of the joints and accessories shall be such that the accessories are fully concealed. The fabrication of doors, window etc. shall be done in suitable sections to facilitate easy transportation, handing and installation. Adequate provision shall be made in the door and windows members for anchoring to support and fixing of hardware and other fixture as approved by the Engineer-in-Charge.

(vii) Anodizing:

All aluminum sections shall be anodized as per IS : 7088 and to required colour as specified in the item as per IS : 1868 grading, after cutting the members to requisite sizes. Anodizing shall be to the specified grade with minimum average thickness of 15 microns when measured as per IS : 6012. The anodic coating shall be properly sealed by steams or by boiling in deionized water or cold sealing process as per IS : 1868 / IS : 6057. Polythene tape protection shall be applied on the anodized sections before they are brought to site. All care shall be taken to ensure surface protection during transportation, storage at site and installation. The tape protection shall be removed on installation. The sample will be tested in the approved laboratory and cost of samples, cost or testing shall be borne by the contractor.

(viii) Powder Coating:

The powder used for powder coating shall be high grade pure polyester powder made by Berger or Jenson & Nicholson or equivalent. The thickness of powder coating shall not be less than 50 micron at any point if measured with micrometer.

(ix) Protection of Finish:

All aluminum members shall be wrapped with approved self-adhesive non-staining PVC tapes.

(x) Handling and stacking:

Fabricated materials shall be carted in an approved manner to protect the material against any damage during transportation. The loading and unloading shall be carried out with utmost care. On receipt of materials at site, they shall be carefully examined to detect any damaged pieces. Arrangements shall be made for expeditious replacement of damaged pieces / parts. Material found to be acceptable on inspections shall be repacked in crates and stored safely.

In the case of composite windows, and doors the different units are to be assembled first. The assembled composite units should be checked for line, level and plumb before final fixing is done. Unit may be serial numbered and identified as how to be assembled in their final location of situation so warrant's. Where aluminum comes into contact with masonry brickwork/concrete/plaster or dissimilar metals. It shall be coated with approved insulation lacquer paint or plastic tape to ensure that electro chemical corrosion is avoided. Insulation materials shall trimmed off to clear flush line on completion.

(xi) Silicon Sealant:

The peripheral gaps between plastered faces / RCC and aluminum sections shall be sealed both from inside and outside to make the windows watertight. Gaps upto 10mm between the peripheral aluminum member and masonry /RCC/ Stone shall be sealed by inserting. Backer Rod manufactured by HT TROPLAST or Supreme Industries and by application of weather silicon / sealant of DOW corning / GE silicon make.

The contractor shall be responsible for assembling composite, bedding set straight plumb, level and for their satisfactory operation after fixing is complete.

(xii) Installation:

Just prior to installation the doors, windows etc. shall be uncrated and stacked on edge on level bearers and supported evenly. The frame shall be fixed in to position true to line and level using adequate number of expansion machine bolts, anchor fasteners of approved size and manufacture and in an approved manner. The holes in concrete / masonry members for housing anchor bolts shall be drilled with an electrical drill.

The doors windows assembled as shown on drawings shall be placed in correct final position in this opening and marks made on concrete members at jambs, sills and heads against the holes provided in frames for anchoring. The frame shall then be removed the n the opening and laid aside. Neat holes with parallel sides of appropriate size shall then be drilled in the concrete members with an electric drill at the marking to house the expansion bolts. The expansion bolts shall then be inserted in the holes, struck with a light hammer till the nut is forced in to the anchor shall. The frame shall then be placed in final position. In the opening and anchored to the support through cadmium plated machine screws of required sized threaded to expansion bolts. The frame shall be set in the opening by using wooden wedges at supports and be plumbed in position. The wedges shall invariably be placed at meeting points of glazing bars and frames.

(xiii) Neoprene Gaskets:

The E.P.D.M. gasket of suitable profile as manufactured by HANU INDUSTRIES, ANNAND LESCUYER make shall be provided at all required positions to make the glazing airtight. The contractor shall provide and install Neoprene Gaskets of approved size and profile at all locations as shown and as called for to render the doors windows etc. absolutely air tight and weather tight. The contractor shall submit samples of the gaskets for approval and shall procure after approval only.

(xiv) Fittings:

The contractor shall cut the floor properly with stone cutting machine to exact size and shape. The spindle of suitable length to accommodate the floor finish shall be used. The contractor shall give the guarantee duly supported by the company for proper functioning of floor springs at least for 10years.

Hinges, stays handles, tower bolts, locks and other fittings shall be of good quality and manufacturer as approved by the Engineer-in-Charge.

(xv) Manufacture's Attendances:

The manufacture immediately proper to the commencement of glazing shall adjust and set all windows and doors and accept responsibility for the satisfactory working of the opening frames.

15. FLOORING

- (i) Flooring in toilets shall be laid to the required slope/gradient as per the directions of the Engineer-in-Charge using ceramic tiles.

- (ii) Flooring for workshop area shall be Hard Crete as per the CPWD specifications.
- (iii) Flooring for rooms inside the workshop shall be of vitrified tiling as per CPWD specifications

16. WOODWORK:

- (i) The samples of species of timber (sal, Teak or seasoned wood as per requirement) to be used shall be got approved and deposited by the contractor with the Engineer-in-charge before commencement of the work. The contractor shall produce cash vouchers and certificates from kiln seasoning or/and chemical treatment plants about the timber section to be used on the work having been kiln seasoned or/and chemically treated by them.
- (ii) Factory made shutter as specified shall be obtained from factories as per list given in List of approved makes or from any other factory to be approved by the Engineer in charge & shutters to confirm to IS 2202 1977 (part-I).
- (iii) The contractor shall inform well in advance to the Engineer in charge the names and address of the factory from where the contractor intends to get the shutters manufactured. The contractor will place order for manufacture of shutters only after written approval of the Engineer in charge in this regard is given. The contractor is bound to abide by the decision of the Engineer in charge and recommend a name of another factory from the approved list in case the factory already proposed by the contractor is not found competent to manufacture quality shutters. Shutters will however be accepted only if this meet the specified tests. The contractor will also arrange stage wise inspection of the shutters at factory of the Engineer in charge or his authorized representative. Contractor will have no claim if the shutters brought at site are rejected by Engineer in charge in part or in full lot due to bad workmanship / quality even after inspection of factory. Such shutters will not be accepted and the contractor shall remove the same from the site of work within 7 days after the written instruction in this regard is issued by Engineer in charge or his authorized representative.

17. FALSE CEILING:

Providing and fixing tiled false ceiling of approved materials of size 595x595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanized@120grams/sqm, both side inclusive) consisting of main “T” runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet ,spaced at 1200 mm center to center and cross “T” of size 24x25mm made of 0.30 mm thick (minimum) sheet, 1200 mm long spaced between main “T” at 600 mm center to center to form a grid of 1200x600 mm and secondary cross “T” of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main “T” runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4mm GI adjust able rods with galvanized butterfly level clips of size 85x30x0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge. GI Metal Ceiling Lay in perforated Tegular edge global white color tiles of size 595x595 mm and 0.5mm thick with 8mmdrop; made of

GI sheet having galvanizing of 100 gms/sqm(both sides inclusive) and 20% perforation area with 1.8mmdia holes and having NRC (Noise Reduction Coefficient) of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending and perforation, and backed with a black Glass fiber acoustical fleece.

[C] LIST OF APPROVED MAKE OF PRODUCTS FOR WORKS (Civil items)

Sl.No	Description	Approved Manufacturer / Brand Name
1	Ceramic / Glazed Tiles	Somany, Kajaria, Nitco, Johnshon
2	TMT Bars	Major producers like SAIL, RashtriyaIspat Nigam Ltd., TISCO having Thermex or Temp Core system of treatment and valid BIS license.
3	OPC 43 Grade, PPC 43 Grade	L&T, Ultra Tech, ACC, JK, JP, Birla, Shree, Lakshmi, Gujrat Ambuja, Bangur or equivalent.
4	White Cement	Birla White, J.K. white or equivalent
5	Primers, Paints (i/c water proofing cement paint) etc	Nerolac, Asian, Bergar, ICI Dulux,
6	Concrete Admixtures	Fosroc, Sika, Pidilite,
7	White cement putty	Birla, JK or as approved by Engineer-in-charge.
8	Sanitary ware and ceramic fittings.	Parryware, hindware, CERA, Prayag
9	Glass (All type)	Modiguard, Saint Gobain, Asahi.
10	GI Pipes and accessories	Tata, Jindal, BST, GST.
11	Centrifugally Cast Spun Pipes & Fittings.	NECO, Kesoram, or any ISI marked brand
12	uPVC Pipes & Fittings.	Supreme, Finolex, Prayag
13	Brass / CP Brass Fittings.	Jaquar, hindware, Prayag.
14	Aluminum sections(Anodising by approved anodizing firm)	Hindalco, Jindal, Indian Aluminum Co.
15	Water proofing compound	CICO, FOSROC, PIDILITE
16	Stainless steel sink	Neelkanth, Nirali, Prayag
17	Particle board i/c laminated	NOVOPAN, Action Tesa, Century ply, Archidply.
18	Plastic W.C. seat Cover	Hindware, cera, prayag
19	Stoneware Pipes & Gully traps	Perfect, Taya, ISI marked
20	C.I. double flanged valves	Kirloskar, IVC, BUM
21	Rubber gasket for DI /CI pipes	Orient or equivalent
22	Factory made paneled door shutters	Any factory with written approval of Engineer-in-charge.
23	Flush doors	Any ISI marked door.
24	RCC Pipes	Any ISI Marked pipe.
25	PVC tanks	Any ISI marked tank.
26	Mirrors.	Saint Gobain, Modi or as approved by Engineer-in-charge.
27	False ceiling.	Armstrong, Durlum, Anutone.
28	PVC flushing cistern.	Hindware, cera, prayag
29	Manhole covers.	Any ISI marked.

30	Fittings for Structural Glazing	Dorma, Ebco, Ozone.
31	Silicon for structural glazing	Dow, Dubond, Sika, GE silicon.
32	PE-Al-PE pipes.	As per IS 15450-2004, Jindal, Kitec Industries or as approved by Engineer-in-charge
33	Aluminum composite panels	Alstrong, Jindal
34	Insulating board	Supreme, Styrofoam or as approved by Engineer-in-charge.
35	Pressed steel door frames	Factory having valid ISI license or approved by Engineer-in-charge.
36	Fittings for Aluminum doors & windows.	Hardwyn, Ozone, Dorma.
37	Water proofing treatment	The bidder shall associate with him, specialized agencies of the appropriate eligibility to components of specialized nature of items. Contractor shall get the name(s) of his associated specialized agencies approved as early as possible and within one month of award of work from the Engineer-in-charge. whose decision shall be final and binding. If the contractor himself has carried out these specialized items then he shall not require associating with him the specialized agency. In compliance to this, the contractor shall have to supply sufficient proof of having valid experience and expertise for the execution of the same.
38	Structural Glazing & aluminum composite panels.	
39	Toughened Glass partitions.	
40	uPVC windows.	
41	Aluminum doors & windows	
42	Water supply and sanitary works	
43	Stainless steel railings	
44	Anti- termite treatment.	
45.	Stainless Steel Pipes	JINDAL
46.	SS & Brass hardware fitting	Prayag, Hettich, Godrej
47.	CPVC, UPVC, PTMT & SWR pipe & fittings	Prayag, Astral, Ashirwad
48.	PVC tanks (3 layers)	Syntax, Supreme, R.C plasto

[D] Electrical items (Internal Electrical Installations and External Street Lighting)

Technical specification for Electrical works :

Note: The following information given is indicative only. Execution shall be carried out as per functional requirement and design approved by Engineer-in-charge.

1. All internal electrical works shall be carried out with MS conduit with raceway/cable tray so that it should not be exposed. All switches, sockets, AC Starter, IP Phone socket, Data sockets, stepped type electronic fan regulators, bell push and accessories along with matching mounting boxes shall be of modular type.

2. All lighting fixtures should be LED type having efficacy more than 100 Lumen / Watt, CRI >70, THD <10%, LM 79 & LM 80 and test report from NABL accredited lab should be submitted by the agency. Driver should be BIS certified. Colour temperature should not be less than 6000 K.
3. Required illumination level for general lighting shall be achieved on the basis of required lux level in various areas, Light power density as per CPWD Specifications.
4. Arrangement of luminaries in various areas shall be done on the basis of Illumination level & light power density as specified in CPWD Specifications Internal 2013(with latest correction slip) and National Building Code 2016.
5. Ceiling fans will be provided in building and at each location except toilets / Bath rooms irrespective of provision of air conditioners. All 1400 mm/1200mm ceiling fans shall be 5 star rated. Optimum size / number of ceiling fans for room/Hall of different sizes shall be as per provision laid down in CPWD Specifications for internal EI work 2013. Size of ceiling fan shall be either of 1200 mm or 1400 mm only. Minimum air delivery and service value shall be as per the above specification.
6. Telephone outlet point wiring of office shall be terminated in suitable size of G.I. Junction box in DUs direct from ground floor to each DU/ user location. However, conduit for telephone wiring may be provided through branching by providing suitable size of G.I. box along suitable tag block at each floor. All data cables and telephone cables shall be Cat 6 UTP design and should be compatible with IP phones. The inter connections of all junction boxes fixed at all floors shall be done properly making proper distribution system and with the prior approval of Engineer-in-charge. Providing incoming television / telephone cables from outside of the building is not covered in the scope of this bid.
7. The breaking capacity of MCCB for all types of panel boards except DBs shall be minimum 35KA for ratings up to 200A and 50KA for 250A ratings & above. The rated service breaking capacity should be equal to rated ultimate breaking capacities ($I_{cs}=I_{cu}$). Where I_{cs} is service breaking capacity and I_{cu} is ultimate breaking capacity and they should be of approved make. The MCB/MCCB shall be same make of approved company.
8. LT Panels: Incomer of essential panel shall be connected with DG set Supply. Incomer, outgoing, bus bar, indicating instruments etc shall be designed as per connected load and shall be got approved from Engineer-in-charge. Panel shall be fabricated from CPRI approved firms and strictly as per CPWD Specifications. The drawing of panel boards must be got approved from Engineer – in – charge before fabrication work. The panel board shall consist of MCCB as incomer and outgoing, copper bus bar, digital type ammeter, voltmeter OR multifunction meter, selector switches, LED type indication lamps etc as per standard sound engineering practice. Every multi function meter should have RS 485 port.
9. Minimum size of copper conductor for power wiring shall be 4 Sq mm and that for light and fan points wiring shall be 1.5 sq mm. All wires used shall be of FRLSH type in internal, external and electrical panel wiring.
10. The wiring and conduit route plan/drawings shall be submitted by the contractor and shall be got approved from the Engineer-in-charge.

11. To facilitate drawing of wires, 18 SWG GI fish wire shall be provided along laying of recessed conduit. Conduits laid for other services, like fire alarm, PA system etc., where wiring is not done along IEI works, fish wire shall be invariably drawn.
12. The connection between incoming switch / isolator and bus bar shall be made in suitable size of thimble and cable.
13. While laying conduits for fire alarm system, sufficient junction outlets are to be provided as per the direction of the Engineer-in-Charge for detectors as required.
14. After completing the work, necessary test results as envisaged in CPWD General Specifications Part-I (Internal)-2013 & Indian Electricity Rules 1956, shall be recorded and submitted to the IITP. The results shall be within the permissible limits. Test report forms duly signed by authorized person for obtaining electric connections (energy meters) by the agency shall be given to the allottees.
15. Lightning arresters shall be provided for building as per IS; 2309-1989 as amended up to the previous day of submission of bid and CPWD Specifications for internal work – 2013& aviation lights (LED Type) shall also be provided.
16. RCBO of 300 ma sensitivity of suitable rating shall be provided as Incomer of each Distribution boards. RCCB shall be 30ma for light DB, 100ma for power DB & 300ma for equipment / motor.
17. Lighting luminaries (LED type) shall be decided as per functional requirement, design and drawing approved.
18. For accommodating various size of cable incoming to the building, Medium class G.I. pipe of suitable size shall be provided.
19. Size of distribution board shall be as per number of light / power circuits. All distribution boards shall be pre-wired and double door type. RCBO of suitable rating shall be provided as main incomer in all DBs.
20. In vertical DBs used for power distribution main incomer shall be MCCB of suitable rating breaking capacity not less than 16KA. ICs=ICu.(100%)
21. LT panel shall be cubicle type with IP 52 (corrected as per corrigendum) protection class and fabricated from CPRI approved fabricator and shall be equipped with digital type measuring instruments like ammeter, voltmeter, frequency meter, watt meter, multi- function meter etc. as per drawing approved by Engineer – in –charge. Panel shall be fabricated from 1.6 mm thick M.S. sheet powder coated 7 tank process and shall be equipped 4 pole MCCBs, MCBs, Bus bar, digital voltmeter, ammeter, KWH meter, LED indicating lamp extended rotary handle and all accessories as required.
22. If used as incomer then it should have earth fault protection and time delay in addition to above protection. Earth leakage modules are not acceptable.
- 23..Cu Plate Earthing: Earthing system comprising of earth electrode, earth conductor, earth bus, protective conductor etc for each building shall be as per provision laid down in CPWD specifications part – I 2013.Earthing system should be designed such as to maintain earth resistance

as specified in CPWD Specifications. Earth resistance shall be checked / tested in harsh climatic conditions.

24. External lighting

Street light has to be provided along the road work as below

1	For road and Area lighting	Octagonal poles of 7m Height with single bracket and 01 nos. LED light fittings. Illumination to be maintained as perNBC2016. For area lighting suitable number LED post top Light Fittings to be provided.
2	Feeder pillar	To be fabricated with astronomical timer and as per CPWD Specifications by a CPRI approved fabricator.IP55

The electrical Installation work shall be carried out in accordance with Indian Standard Code of Practice. It shall also be in conformity with the current Indian Electricity rules and regulations and requirements of the Local Electricity Supply Authority and Fire Insurance regulations, so far as these become applicable to the installation. Electrical work in general shall be carried out as per following CPWD Specifications amended up to the previous day of submission of bid.

General Specifications for Electrical Works.- Part -II- External Work- 1994.Wherever these specifications calls for a higher standard of material and or workmanship than those required by any of the above mentions regulations and specification then the specification hereunder shall take precedence over the said regulations and standards.

The details of scope of work subhead wise are given in the subsequent paras. The quantities worked out in schedule of quantities are based on particular equipment considered at design stage. The contractor is required to recheck the quantities based on equipment offered by him to achieve required parameters.

25. Feeder Pillar

Outdoor type Feeder Pillars shall be suitable for 3 phase, 50Hz, 415 volts, A.C. system and shall generally conform to IS 5039. Feeder Pillar shall be fabricated as per CPWD Specifications and sound engineering practice. Fabrication shall be started only after approval of drawing by Engineer-in-charge. All components of feeder pillars like MCCBs, Bus bar, MCBs, Astronomical timer etc. shall fulfill all requirement of relevant IS codes. MCCBs upto 250 amp capacity should have breaking capacity not less than 35 KA and that of more than 250 Amp shall have breaking capacity 50 KA . All MCBs to be used shall have breaking capacity not less than 10KA. Bus bar shall be of tinned copper electrolytic grade. For all MCCBs and MCBs ICs = ICu. Enclosures of feeder pillars shall be painted with 7 tank process. Feeder pillar shall not less than IP-55.

26. Moulded Case Circuit Breakers

Moulded Case Circuit Breaker shall be incorporated in the Feeder Pillars wherever specified. MCCB's shall conform to IS : 13947 (Part-II) IEC-947(2) in all respects. MCCB's shall be suitable either for

single phase AC 230 volts or three phase 415volts. All MCCBs should be of Four pole when used for Three phase circuits and Double pole for single phase circuits.

27. Road / street lighting: For Road lighting Pole shall be GI octagonal type of approved brand. Light fittings shall be LED type. Illumination label to be maintained at road shall be as specified in NBC code / CPWD Specifications. Façade lighting for the building shall be done in LED lighting.

(1) The height and distance between each pole shall be maintained as per provision laid down in CPWD Specifications. The minimum specifications for street light fittings to be used are :

- (i) Type : LED type only
- (ii) IP rating : 66
- (iii) Efficacy : Not less than 100 lumens / system watt
- (iv) Colour temperature : >5700
- (v) CRI > 70
- (vi) THD < 10%
- (vii) Housing : Die cast aluminium
- (viii) PF > 0.95
- (ix) Operating voltage : 140 – 270 V, a.c. 50 Hz

28. ELECTRIC MAINS & SUB MAINS:

SITC of wall/ free standing floor mounted dust and vermin proof compartmentalized cubical panel made out of CRCA sheet , required hardware ,duly treated for derusting in 7 tank process with dephosphating and with powder coating on both side of panel in desired shade The panel having PU/ Neoprene rubber gasket of not less than 3mm thickness , separate detachable gland plate M.S. base channel ,hinged door with locking arrangement for equipment/switchgear . Thickness of sheet shall not be less than 1.6 mm up to 600 mm length / width of any compartment and be of 2.0 mm above 600 mm. Load bearing structure shall be of 2.0 mm thick sheet supported by base M.S. channel if required . Side walls and cable alley compartments having bolted type doors with / without detachable extension type structure. (only outer area on all sides shall be measured & panel to be fabricated from CPRI approved fabricator). The submain panel for the each floor consisting of Aluminum bus bars of appropriate size, incoming and outgoing MCCBs (Make: Schneider, Siemens, GE , ABB, Legrand), indicating lamp and digital multifunction meter. There should be two separate submain panels charging to light and power DB separately through a 3.5 core XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade aluminum cable of appropriate size. The main panel for complete setup consisting of Aluminum bus bars of appropriate size, incoming and outgoing MCCBs (Make: Schneider, Siemens, GE , ABB, Legrand), indicating lamp and digital multifunction meter The main panel should be in two parts one is charging to the light sub main and other is charging power submain and having changeover at one side of main panel. The main panel should charge submain panel through a 3.5 core XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade aluminum cable of appropriate size.

29. Fire Systems and Public Address System

1. Agency must provide addressable Fire detection system & detector for office area and required no. of Fire Extinguishers and First Aid Hose Reel as per NBC-2016 for work shop.
2. Agency must provide Public Address System as per Standards.

Technical Reference

- (a) CPWD General Specifications for Electrical works Part - VI -Fire Alarm System-1988.
- (b) BIS Code of practice (IS: 2189 – 1988) for Selection, Installation and Maintenance of Automatic Fire detection and Alarm system amendments up to date.
- (c) CPWD General Specifications for Electrical works Part - I Internal - 2013 as amended up to the previous day of submission of bid.
- (d) CPWD General Specifications for Electrical works Part - II External - 1994 as amended up to the previous day of submission of bid.
- (e) The contractor shall carry out the work as per requirements of the Patna Fire Services and Local body regulations as applicable.

30. Lightning Protection and Earthing System

Lighting protection system shall be an advanced integrated lightning protection system.

The work shall include, but not limited to, the following:-

Prepare plans showing internal/external earth grid, earth electrodes and lightning protection with size of conductors and details of each electrical and lightning arrestors along-with details of earthing pits.

Design of earthing system shall be based on survey, investigation data, load and as per relevant Indian Standards and Indian Electricity rules.

31. L.T. CABLES

General

LT cables shall be supplied, inspected laid tested and commissioned in accordance with specifications, relevant Indian Standards Specifications and cable manufacturer's instructions.

The recommendation of the cable manufacturer with regard to joining and sealing shall be strictly followed.

Material

The LT cable shall be PVC insulated. Aluminum conductor armoured cable conforming to IS : 7098 Part I & II 1988 / 1985 amended up to the previous day of submission of bid.

All cables shall be inspected upon receipt at site and checked for any damage during transit.

Joints in Cables

The Contractor shall take care to see that all the cables received at site are apportioned to various locations in such a manner as to ensure maximum utilization and avoidance of joining cables.

[E] List of approved make (Electrical items)

	<u>Electrical Items</u>	
1	PVC CONDUITS (MMS) ISI MARKED	AKG / BEC/ PRECISION / POLYCAB
2	PVC CONDUIT ACCESSORIES (ISI MARKED)	AKG / BEC/ PRECISION / POLYCAB
3	M.S. CONDUIT - ERW (ISI MARKED)	BEC/AKG/ STEEL CRAFT
4	M.S. CONDUIT ACCESSORIES (ISI MARKED)	BEC/AKG/ STEEL CRAFT
5	PVC INSULATED FRLS COPPER CONDUCTOR CABLES 1.1 KV GRADE (ISI MARKED)	FINOLEX/ KEI/ POLYCAB/ HAVELLS/ RR KABLE
6	MODULAR PLATE TYPE SCH / SOCKET GI BOXES / FAN REGULATOR//TELEPHONE SOCKET	SCHNEIDER / LEGRAND ARTEOR / MK / ABB
7	MCB / ISOLATOR / MCB DB'S / RCCB / ELCB / MODULER TYPE BELL	LEGRAND / SCHNEIDER / ABB / L&T/ SIEMENS

8	LUMINAIRES / LIGHT FITTINGS	PHILIPS / WIPRO / CROMPTON GREAVES/ BAJAJ/JAQUAR
9	CEILING FAN / EXHAUST FAN	HAVELLS / CROMPTON GREAVES / USHA / ALMONARD
10	TELEPHONE CABLES / WIRES (ISI MARKED) / CO- AXIAL TV CABLES	FINOLEX/ POLYCAB / HAVELLS / RR KABLE/ LEGRAND
11	CAT 6 CABLE/ CAT 6A/ FIBER OPTICCABLE& ASSOCIATED ITEMS	SCHNEIDER/SIEMON/ / LEGRAND/ABB/D LINK
12	TELEPHONE TAG BLOCK DP BOXES	KRONE / D LINK / ITL
13	LUGS / FERRULES / THIMBLES	DOWELLS / JAINSON
14	1.1 KV XLPE CABLE (ISI MARKED)	FINOLEX/ POLYCAB / HAVELLS / RR CABLE/ KEI
15	ELECTRICAL PANELS / METER BOARDS	CPRI Approved Panel Builder
16	RJ-45 MODULAR SOCKET AND PLATE	LEGRAND / SCHEINDER/ MK /ABB
17	MCCBS	LEGRAND / L&T / SCHNEIDER / ABB / SIEMENS
18	OCCUPANCY SENSOR	PHILIPS / WIPRO / CROMPTON GREAVES / HONEY WELL
19	CURRENT TRANSFORMERS	AUTOMATIC ELECTRIC/ KAPPA/ L&T/ NEPTUNE

2 0	DIGITAL INDICATING MEASURING INSTRUMENTS /MULTIFUNCTION METERS	L&T (QUASER)/ SCHNEIDER (CONZERV) / AE
2 1	SELECTOR SWITCH	L&T/ KAYCEE/ SIEMENS
2 2	INDICATION LAMP & PUSH BUTTON	BCH/ L&T/SIEMENS/ SCHNEIDER
2 3	BUS TRUNKING, RISING MAIN & TAP-OFF BOX	LEGRAND/ L&T/ SCHNEIDER/ C & S / ABB
2 4	LT CABLE (ISI MARKED) 1.1 KV	POLYCAB / HAVELLS / KEI/ RR CABLE
2 5	CABLE TRAYS & ACCESSORIES	VENUS/ SLOTCO/ PILCO/ REECO/OBO
2 6	CAPACITOR(ISI MARKED)	LUMPSUMOS/ NEPTUNE/ SIEMENS/ L&T
2 7	CABLE GLAND/ LUGS/ THIMBLES	COMMET/ DOWELLS/ RAYCHEM/ GRIPWELL
2 8	OCTAGONAL STEEL POLE	BAJAJ / VOLMART /PHILIPS /
2 9	LED STREET LIGHT FITTINGS	PHILIPS / CROMPTON GREAVES / WIPRO /BAJAJ/Jaquar
3 0	Fire Extinguishers	Cease Fire/ Minimax/ Safex

7. PREPARATION OF BID

The bid, and all correspondence and documents, related to the bid, exchanged between the bidder and the Registrar shall be written in the English language. Supporting documents and printed literature furnished by the bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the bid the English translation shall prevail.

DOCUMENTS COMPRISING THE BID:

Bids are being invited on-line but bidders are requested to submit the bids in hard copy also. In case bids submitted on line are in variance to bids submitted in hard copy, such bids shall be summarily rejected, The bid submitted by the bidder shall comprise of two envelopes i.e. envelope A (Technical Bid) and envelope B (Financial Bid) submitted simultaneously, first containing technical proposals and second containing price proposals.

Technical Bid shall contain following documents:

- a. Scanned copy of Receipt of the Earnest Money Deposit (EMD) /its exemption, if any.
- b. Scanned Copy of GST No. and Scanned Copy of PAN Card.
- c. Scanned copies of work order and experience certificates as per the technical criteria of tender document, along with information regarding works executed in the last seven years as per Annexure II of NIT.
- d. Scanned Copy of Audited Annual Accounts for Financial Years 2018- 19, 2019-20 and 2020-21. Average Annual Turnover for last three financial years i.e. 2018- 19, 2019-20 and 2020-21 should not be less than 50 % of the estimated cost & Should not have incurred any loss in more than two years during the immediate last five consecutive financial years, ending 31.03.2021. Also, to provide with a certified CA copy of turnover summary as per Annexure I of NIT.
- e. Copy of ESIC & EPF Registration copy
- f. Solvency certificate as per the format in Annexure III of NIT.
- g. Affidavit as per Annexure IV of NIT

Financial bid shall contain following documents:

- i. Financial bid duly filled by the intending bidder as per schedule-A.

2. PRICE SCHEDULES:SCHEDULE-A

2.1 BID PRICES:

Bidders shall quote for the entire scope of work on a "single responsibility" basis such that the total bid price covers all the Contractor's obligations mentioned in or to be reasonably inferred from the bidding documents in respect of the minor modifications jointly agreed in design, manufacture, including procurement, supply, construction, installation, testing, commissioning and completion of the building in all respect.

Bidders shall give a **consolidated single rate and amount**, in the manner and detail called for in the schedules-A of bid document. The bidder shall fill in rate, both in figures and words.

3. BID CURRENCIES:

The prices shall be quoted in Indian currency only. The institute will not arrange for any foreign currencies for import of any type of material/ plant / spares etc.

4. BID VALIDITY:

Bids shall remain valid for a period of not less than 90 days after opening of the technical bid. A bid valid for a shorter period shall be rejected by the Registrar as non-responsive.

In exceptional circumstances, prior to expiry of the original bid validity period, the Registrar may request the bidders to extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing or by cable. A bidder may refuse the request without forfeiting its Earnest Money. A bidder agreeing to the request will not be required or permitted to modify its bid, but will be required to extend the validity of its Bid Security for the period of the extension, and in compliance with clauses of contract in all respects.

The bid security / EMD may be forfeited

- (a) If the bidder withdraws its bid after bid opening during the period of Bid validity.
- (b) If the bidder does not accept the correction of its bid price.
- (c) In the case of a successful bidder, if fails within the specified time limit to

1. Sign the Contract Agreement, or
2. Furnish the required performance security deposit.

- (d) If a bidder reduces the rates voluntarily or modifies his offer voluntarily after opening of the financial tenders/ negotiations, his offer shall stand cancelled automatically, his

Bid Security / EMD shall be forfeited and action for debarring him from business shall be taken as per enlistment rules.

8. INTEGRITY PACT

To,

.....

.....

.....

Sub: NIT No -----

Name of work: for the work-----

Dear Sir,

It is here by declared that IITP is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the bidder/ bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the IIT.

Yours Faithfully,

**Registrar,
IIT,Patna**

INTEGRITY PACT

To,

**Registrar,
IIT, Patna**

Sub: Submission of Tender for the work of _____

Dear Sir,

I/We acknowledge that IITP is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that **THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE** of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by IIT. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, IIT shall have unqualified, absolute and unfettered right to disqualify the bidder/bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of IIT.

INTEGRITY AGREEMENT

This Integrity Agreement is made at on this day of 2022

BETWEEN

Board of Governors represented through **Registrar, IIT, Patna-302017** (Hereinafter referred as the '**Principal/Owner**', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....
...

(Name and Address of the Individual/firm/Company)

through (Hereinafter referred to as the (Details of duly authorized signatory)

"Bidder/Contractor" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal/ Owner has floated the Tender (NIT No.) (hereinafter referred to as "**Tender/ Bid**") and intends to award, under laid down organizational procedure, contract for (*name of work*) _____

hereinafter referred to as the "**Contract**".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "**Integrity Pact**" or "**Pact**"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

- (1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand,

take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

- (b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
 - (c) The Principal/Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- (2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

- (1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- (2) The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution.
 - (a) The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
 - (b) The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - (c) The Bidder(s)/ Contractor(s) will not commit any offence under the relevant IPC/ PC Act. Further the Bidder(s)/ Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/ Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

- (d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/ representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in at under but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
- (e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose (with each tender as per Performa enclosed) any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
- (3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- (4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice **means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.**
- (5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

- (1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
- (2) **Forfeiture of EMD/Performance Guarantee/Security Deposit:** If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/ determined the Contract or has accrued the right to terminate/ determine the Contract according to Article 3(1), the Principal/ Owner apart from exercising any legal rights that may have accrued to the

Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.

- (3) **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of **Indian** Penal code (IPC)/Prevention of Corruption Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

- (1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/Owner.
- (3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors.

- (1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/sub-vendors.
- (2) The Principal/Owner will enter in to Pacts on identical terms as this one with all Bidders and contractors.
- (3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the contract has been awarded. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, IITP.

Article 7- Other Provisions

- (1) This Pact is subject to Indian Law, place of performance and jurisdiction is the **Headquarters of the Registrar office IITP**, which has floated the Tender.
- (2) Changes and supplements need to be made in writing. Side agreements have not been made.

- (3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- (4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.
- (5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this **Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.**

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHERE OF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....
 (For and on behalf of Principal/Owner)

.....
 (For and on behalf of Bidder/Contractor)

WITNESSES:

1.
 (Signature, name and address)

2.
 (Signature, name and address)

Place:

Dated:

**9. FORM OF PERFORMANCE SECURITY (GUARANTEE)BANK
GUARANTEE BOND**

In consideration of the Board of Governors (hereinafter called “The Government”) having offered to accept the terms and conditions of the proposed agreement between The Registrar, IIT, Patna And (herein after called “the said Contractor(s)”) for the work..... (hereinafter called “the said agreement”) having agreed to production of an unconditional Unconditional Bank Guarantee for Rs. (Rupees only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

1. We,.....(hereinafter referred to as “the Bank”)hereby undertake to pay to the Government an amount not exceeding Rs. (Rupees..... Only) on demand by the Government.

2. We,(indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demure, merely on a demand from the Government stating that the amount claimed as required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees.....only)

3. We, the said bank further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) shall have no claim against us form a king such payment.

4. We, (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineering-Charge on behalf of the Government certified that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5. We, (indicate the name of the Bank) further agree with the Government that the Government shall have the fullest liberty without our

consent and without affecting in any manner our obligation here under to vary any of the terms and conditions of the said agreement or to extend time of performance by The said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against he said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act of

Omission on the part of the Government or any indulgence by the Government to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of sore lieving us.

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

7. We,.....(indicate the name of the Bank) lastly undertake not to evoke this guarantee except with the previous consent of the Government in writing.

8. This guarantee shall be valid up tounless extended on demand by the Government.

Notwithstanding anything mentioned above, our liability against this guarantee is restricted to

Rs (Rupees)

Dated theday of.....for.....(indicate the name of the Bank)

10.LUMPSUM Contract of work

(A). Tender for the work of: _____

- i) To be submitted **by 03:00 p.m on 11.07.2022** on CPP Portal
- ii) To be opened in presence of tenderers who may be present at **03:30 p.m on 12.07.2022** in the office of The Executive Engineer, Indian Institute of Technology Patna

TENDER

I/We have read and examined the notice Inviting Tender, Schedule A, B, C, D, E, & F, Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, special conditions, Schedule of Rate & other document and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the Registrar, Indian Institute of Technology, Patna within the time specified in Schedule 'F' viz, schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-I of General Rules and Directions and in clause 11 of the Conditions of contract and with such materials as are provided for by, and in respects in accordance with such conditions so far as applicable.

We agree to keep the tender open for ninety (90) days from the date of opening of technical bid and not to make any modifications in its terms and conditions.

A sum of **Rs 10,75,000** /- is hereby forwarded in Demand draft / Deposit at call Receipt of a Schedule Bank as performance guarantee. If I/we, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said Registrar IITP or his successors, in the office shall without prejudice to any other right and remedy, be at liberty to forfeit to said earnest money absolutely. Further, if I/We fail to commence the work as specified, I/we agree that the Registrar, Indian Institute of Technology, Patna or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said performance guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision containing in Clause 1 2.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeitures of earnest money or Performance guarantee as aforesaid, I/We shall be debarred from participation in the retendering process of the work.

I/We hereby declare that I/we shall treat the tender documents drawings and other records connected with the work as secret/ confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the state.

Dated

Signature of Contractor

Witness:
Address:
Occupation:

Postal Address:

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the Board of Governors, Indian Institute of Technology, Patna for a sum of (Rupees..... only...)

The letters referred to below shall form part of this contract agreement: -

- a)
- b)
- c)

For & on behalf of the Board of Governors Indian Institute of Technology, Patna

Signature_____

Dated.....

Designation - Registrar, IITP

12. GENERAL CONDITIONS OF CONTRACT

Definitions:

1. The contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the Director, IIT Patna and the Contractor together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-charge/ Architects and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.
2. In the contract, the following expressions shall, unless the context otherwise requires have the meanings, hereby respectively assigned to them: -
 - i) The expression works or work shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
 - ii) The site shall mean the land/ or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
 - iii) The contractor shall mean the individual, firm or company, whether incorporated or not, undertaking the works shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
 - iv) The Engineer-in-charge means the Engineer of IIT Patna who shall supervise and be in-charge of the work.
 - v) Department means IIT Patna, represented through its Registrar.
 - vi) Government means Govt of India.
 - vii) Accepting authority shall mean the authority who accepts the tender.
 - viii) Excepted Risk are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Institute, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by Institute of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Institute faulty design of works.
 - ix) Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard Schedule of Rates mentioned in Schedule 'F' hereunder, with the amendments thereto issued up to the previous day of submission of tender.
 - x) Tendered value means the value of the entire work as stipulated in the letter of award.
 - xi) GST shall mean Goods & Service Tax- Central, State and Inter-state.

Scope & Performance

1. Where the context so requires, words imparting the singular only also include thplural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.
2. Headings and Marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
3. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications. Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.
4. The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and in the full and entire execution and completion of the works. The descriptions given in the Schedule of quantities shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labors necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

Sufficiency of Tender:

5. The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and the rates and price quoted in the Schedule of Quantities, which rates and prices shall except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

6. Signing of Contract

- (a) (i) The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority shall, within 15 days from the stipulated date of start of the work sign the contract consisting of the notice inviting tender, all the documents if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
- (ii) No payment for the work done will be made unless contract is signed by the contractor.

CLAUSES OF CONTRACT

Clause – I

Performance Guarantee:

The contractor shall submit an irrevocable Performance Guarantee of 3% (Three Percent) of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance. This period can be further extended by the Engineer-in-charge upto a maximum period as specified in Schedule 'F' on written request of the contractor stating the reason for delays in procuring the Unconditional Bank Guarantee, to the satisfaction of the Engineer-in-Charge. This Guarantee shall be in the form of Deposit at call receipt of an scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay Order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Govt. Securities or Fixed Deposit Receipts or Guarantee Bonds of any scheduled Bank or the State Bank of India in accordance with the form annexed hereto. In case a fixed deposit receipt of any bank is furnished by the contractor to the Institute as part of the performance guarantee and the bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Institute to make good the deficit.

- i) The performance Guarantee shall be initially valid upto the stipulated date of completion plus 90 days beyond that. In case the time of completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest.
- ii) The Institute shall not make a claim under the Performance guarantee except for amounts to which the Institute is entitled under the contract (notwithstanding and/or without prejudice to any other provisions in the contract agreement) in the event to f:
 - (a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Institute may claim the full amount of the Performance Guarantee.
 - (b) Failure by the contractor to pay to the Institute any amount due, either as agreed by the contractor or determined under any of the clauses/conditions of the agreement, within 30 days of the service of notice to this effect by engineer-in-Charge.
- iii) In the event of the contract being determined or rescinded under provision of any of the clause/condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the Institute.

Clause –1 A: Recovery of Security Deposit: -

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit Institute at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 5% of the gross amount of each running bill, till the amount to security deposit accumulates to @ 5% of the tendered value of the work excluding the Performance bank guarantee. Such deductions will be made and held by Institute by way of Security Deposit unless he/ they has/have deposited the amount of Security at the rate mentioned above in cash or in the form of Govt. Securities or fixed deposit receipts. In case a fixed deposit receipt of any Bank is furnished by the contractor to the Institute as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Institute to make good the deficit.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due to or may become due to the contractor by Institute on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by Scheduled Bank or Institute Securities (if deposited for more than 12 months) endorsed in favour of the Institute, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills of the contractor at the rates mentioned above.

Note – 1 : Government papers tendered as security will be taken at 5% (five percent) below its market price or at its face value, whichever is less. The market price of Government paper would be ascertained by the Engineer –in-charge at the time of collection of interest and the amount of interest to the extent of deficiency in value of the Government paper will be withheld if necessary.

Note – 2 : Government Securities will include all forms of Securities mentioned in rule No. 274 of the G.F Rules except fidelity bond. This will be subject to the observance of the condition mentioned under the rule against each form of security.

Note – 3 : Note 1 & 2 above shall be applicable for both clause 1 & 1A

Clause -2: Compensation for Delay:-

If the contractor fails to maintain the required progress in terms of clause 5 or to complete the work and clear the site on or before the contract or justified extended date of completion as per clause 5 (excluding any extension under Clause 5.5) as well as any extension granted under clauses 12 and 15, he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as compensation the amount calculated at the rates stipulated below as the authority specified in schedule 'F' may decide on the amount of Tendered Value of the work for every completed day/month (as determined) that the progress remains below that specified in Clause 5 or that the work remains incomplete.

- 1) Compensation for Delay of work: With maximum rate being @ 1% per month of delay to be Computed on per day basis based on quantum of damage stated due to stated delay on the part of contractor.

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 of the Tendered Value of the Sectional part of work as mentioned in Schedule 'F' for which a separate period of completion is originally given.

In case no compensation has been decided by the authority in Schedule 'F' during the progress of work, this shall be no waiver of right to levy compensation by the said authority if the work remains incomplete on final justified extended date of completion. If the Engineer in Charge decides to give further extension of time allowing performance of work beyond the justified extended date, the contractor shall be liable to pay compensation for such extended period. If any variation in amount of contract takes place during such extended period beyond justified extended date and the contractor becomes entitled to additional time under clause 12, the net period for such variation shall be accounted for while deciding the period for levy of compensation. However, during such further extended period beyond the justified extended period, if any delay occurs by events under sub clause 5.2, the contractor shall be liable to pay compensation for such delay.

Provided that compensation during the progress of work before the justified extended date of completion for delay under this clause shall be for non-achievement of sectional completion or part handing over of work on stipulated/justified extended date for such part work or if delay affects any other works/services. This is without prejudice to right of action by the Engineer in Charge under clause 3 for delay in performance and claim of compensation under that clause.

In case action under clause 2 has not been finalized and the work has been determined under clause 3, the right of action under this clause shall remain post determination of contract but levy of compensation shall be for days the progress is behind the schedule on date of determination, as assessed by the authority in Schedule F, after due consideration of justified extension. The compensation for delay, if not decided before the determination of contract, shall be decided after of determination of contract.

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 schedule F, or the re-scheduled milestone(s) in terms of Clause 5.4, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied as above. With-holding 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

CLAUSE 2A: Incentive for early completion:

In case, the contractor completes the work ahead of updated stipulated date of completion considering the effect of extra work (to be calculated on pro-rata basis as cost of extra work X stipulated period/tendered cost), a bonus @1% (one percent) of the tendered value per month computed on per day basis, shall be payable to the contractor, subject to a maximum limit of 5% (five percent) of the tendered value. The amount of bonus, if payable, shall be paid along with final bill after completion of work, provided always that provision of the Clause2A shall be applicable only when so provided in 'Schedule F'.

Clause – 3

When Contract can be determined: - Subject to other provisions contained in this clause the Director may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/ or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases:

- i). If the contractor having been given by the Director a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or unworkman like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.
- ii). If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
- iii). If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Director (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Director.
- iv). If the Contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any, stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Director.
- v). If the contractor persistently neglects to carry out his obligations under the contract and / or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Director.
- vi). If the contractor commits any acts mentioned in Clause 21 hereof:
 - When the contractor has made himself liable for action under any of the cases aforesaid, the Director on behalf of the IIT Patna shall have powers:
 - a). To determine or rescind the contract as aforesaid (of which termination or rescission notice in writing to the contractor under the hand of the Director shall be conclusive evidence). Upon such determination or rescission, the Earnest Money Deposit, security deposit already recovered and the performance guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Institute.
 - b). After giving notice to the contractor to measure up the work of the contractor and to take such whole or the balance work as shall be un-executed out of his hands to give it to another contractor to complete the work. The contractor whose contract is determined or rescinded as above shall not be allowed to participate in the tendering process for the balance work. In the event of above courses being adopted by the Director the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer –in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

Clause – 4

In case, the work cannot be started due to reasons not within the control of the contractor within 1/8th of the stipulated time of completion of the work, either party may close the contract. In such eventuality, the Earnest Money Deposit and the Performance Guarantee of the Contractor shall be refunded, but no payment on account of interest, loss of profit or damages etc. shall be payable at all.

Clause – 5 : Time and Extension for delay:-

The time allowed for execution of the Works as specified in Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence from such time period as mentioned in letter of award after the date on which the Director 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 Institute shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money absolutely.

As soon as possible after the contract is concluded the contractor shall submit a Time and Progress Chart for each milestone and get it approved by the Engineer-in – charge. The chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of 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 Director 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 schedule 'F'.

If the work(s) be delayed by:-

- i) Force majeure or
- ii) Abnormally bad weather, or
- iii) Serious loss or damage by fire or
- iv) Civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or.
- v) Delay on the part of other contractors or tradesmen engaged by IITP in executing work not forming part of the contractor.

Any other cause which, in the absolute discretion of the authority mentioned in schedule 'F' is beyond the contractor's control. Then upon the happening of any such event causing delay, the contractor shall immediately give notice thereof in writing to the Registrar 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 Registrar to proceed with the

works. Request for rescheduling of milestones and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form. The contractor may also, if practicable, indicate in such a request the period for which extension is desired.

In any such case the Registrar of the Institute may give a fair and reasonable extension of time and reschedule the milestones for completion of work. Such extension shall be communicated to the contractor by the Registrar of the Institute 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 Director and this shall be binding on the contractor.

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement, the value in accordance with the contract of work done. All measurement of all items having financial value shall be entered in Measurement Book and/or level field book so that a complete record is obtained of all works performed under the contract.

All measurements and levels shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties.

If for any reason the contractor or his authorized representative is not available and the work of recording measurements is suspended by the Engineer-in-Charge or his representative, the Engineer-in-Charge and the Department shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to counter sign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer-in-Charge or his representative shall be deemed to be accepted by the Contractor.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available, then a mutually agreed method shall be followed.

The contractor shall give, not less than seven days' notice to the Engineer-in-Charge or his authorized representative in charge of the work, before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any

work without consent in writing of the Engineer-in-Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer-in-Charge's consent being obtained in writing, the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects' liability period.

CLAUSE -6A: COMPUTERIZED MEASUREMENT BOOK: -

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement the value of work done in accordance with the contract. All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of the Computerized Measurement Book having pages of A-4 size as per the format of the department so that a complete record is obtained of all the items of works performed under the contract.

All such measurements and levels recorded by the contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer-in-Charge or his authorized representative as per interval or program fixed in consultation with Engineer-in-Charge or his authorized representative. After the necessary corrections made by the Engineer-in-Charge, the measurement sheets shall be returned to the contractor for incorporating the corrections and for resubmission to the Engineer-in-Charge for the dated signatures by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance.

Whenever bill is due for payment, the contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked from the Engineer-in-Charge and/or his authorized representative. The contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerized measurements, and submit to the department a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer-in-Charge and/or his authorized representative would thereafter check this MB, and record the necessary certificates for their checks/test checks. The final, fair, computerized measurement book given by the contractor, duly bound, with its pages machine numbered, should be 100% correct, and no cutting or over-writing in the measurements would thereafter be allowed. If at all any error is noticed, the contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the

department. Thereafter, the MB shall be taken in the Divisional Office records, and allotted a number as per the Register of Computerised MBs. This should be done before the corresponding bill is submitted to the Division Office for payment. The contractor shall submit two spare copies of such computerized MB's for the purpose of reference and record by the various officers of the department.

The contractor shall also submit to the department separately his computerized Abstract of Cost and the bill based on these measurements, duly bound, and its pages machine numbered along with two spare copies of the "bill. Thereafter, this bill will be processed by the Division Office and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements. The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements/levels by the Engineer-in-Charge or his representative. Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications not withstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed.

The contractor shall give not less than seven days' notice to the Engineer-in-Charge or his authorized representative in charge of the work before covering up or otherwise placing beyond the reach of checking and/or test checking the measurement of any work in order that the same may be checked and/or test checked and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of checking and/or test checking measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of checking and/or test checking measurements without such notice having been given or the Engineer-in-Charge's consent being obtained in writing the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the department to check the measurements recorded by contractor and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that checking and/or test checking the measurements of any item of work in the measurement book and/or its payment in the interim, on account of final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

CLAUSE -7: Payment of Intermediate certificate to be referred as advance: -

All such interim payments shall be regarded as payment by way of advances against final bill payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in- Charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificates (s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is / are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer – in- Charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

Pending consideration extension of date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the Institute to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.

Clause – 8

Completion certificate and completion plans:-

Before applying for obtaining completion certificate, the contractor shall obtain all statutory clearances/NOC/other certificates as required from the concerned authorities. Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-charge and within thirty days of the receipt of such notice the Engineer-in-charge shall inspect the work and if there is no defect in the work shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or(b) for which payment will be made at reduced rates shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/ their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all wood work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution thereof, and not until the work shall have been measured by the Engineer- in-charge. If the contractor shall fail to comply with the requirements of this clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning of dirt on or before the date fixed for the completion of work, the Engineer-in-Charge may at the expense of the contractor remove such scaffolding surplus materials and rubbish etc and dispose of the same as he thinks fit and clean off

such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually by the sale thereof.

Clause 8A

Contractor to keep site clean :-

The splashes and droppings from white washing, colour washing, painting etc on walls, floor windows etc shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc where the work is done without waiting for the actual completion of all the other items of work in the contract. In case the contractor fails to comply with the requirements of this clause, the Engineer-in-charge shall have the right to get this work done at the cost of the contractor either departmentally or through any other agency. Before taking such action, the Engineer-in-charge shall give ten day notice in writing to the contractor.

Clause 8 B

Completion plans to be submitted by the Contractor :-

The contractor shall submit five sets of completion plans within thirty days of the completion of the work along with soft copy. In case, the contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum equivalent to 2.5% of the value of the work subject to ceiling of Rs. 1,00,000/- (Rupees One Lakhs Only) as may be fixed by Director of the Institute concerned and in this respect the decision of the Director of the Institute shall be final and binding on the contractor.

Clause 9

Payment of final bill :-

The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-charge whichever is earlier. The contractor shall make no further claims after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by engineer-in-charge, will as far as possible be made within six months from the date of receipt of the bill by the Engineer-in-charge or his authorized representative.

Clause 9 A.

Payment of Contractors Bill to bank

Payments due to the contractor may, if so desired by him, be made to his bank, registered financial, co-operative or thrift societies or recognized financial institutions instead of direct to him provided that the contractor furnishes to the Engineer-in-Charge (1) an authorization in the form of a legally valid document such as a power of attorney conferring authority on the bank; registered financial, co-operative or thrift societies or recognized financial institutions to receive payments and (2) his own acceptance of the correctness of the amount made out as being due to him by Government or his signature on the bill or other claim preferred against Government before settlement by the Engineer-in-Charge of the account or claim by payment to the bank, registered financial, co-operative or thrift societies or recognized financial institutions. While the receipt given by such banks; registered financial, co-operative or thrift societies or recognized

financial institutions shall constitute a full and sufficient discharge for the payment, the contractor shall whenever possible present his bills duly receipted and discharged through his bank, registered financial, co operative or thrift societies or recognized financial institutions.

Nothing herein contained shall operate to create in favour of the bank; registered financial, co-operative or thrift societies or recognized financial institutions any rights or equities vis-a- vis the President of India.

Clause 10 A.

Materials to be provided by the contractor: -

The contractor shall at his own cost provide all materials required for the works. The contractor shall, at his own expense and without delay, supply to Engineer-in-charge samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the contractor shall be in conformity with the specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer-in-charge furnish proof, to the satisfaction of the Engineer-in-charge that the materials so comply. The Engineer-in-charge shall within five days of supply of samples or within five days of the receipt of test result intimate to the contractor in writing whether samples are approved by him or not. If samples are not approved the contractor shall forthwith arrange to supply to the Engineer-in-Charge for his approval fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with specification, approval of the Engineer-in-charge shall be issued after the test results are received.

The contractor shall at his risk and cost submit the samples of materials to be tested or analysed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or analysis have been made and materials finally accepted by the Engineer-in-charge. The contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.

The contractor shall at his risk and cost make all arrangements and shall provide all facilities as the Engineer-in-charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer-in-charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer-in-Charge or his authorized representative and Architect shall at all times have access to the work and to all such workshops and places where work is being prepared or from where materials manufactured articles, or machinery are being obtained for the works and the contractor shall afford every facility and every assistance in obtaining the right to such access.

The Engineer-in-charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default the Engineer-in-charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to

such materials. The Engineer-in-charge shall also have full powers to require other proper materials to be substitute thereof and in case of default the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the contractor.

Clause 10 B (i)

Secured Advance on Non-perishable Materials :-

The contractor, on signing an indenture in the form to be specified by the Engineer-in-charge shall be entitled to be paid during the progress of the execution of the work upto 75% of the assessed value of any materials which are in the opinion of the Engineer-in-charge nonperishable, non-fragile and noncombustible and are in accordance with the contract and which have been brought on the site in connection therewith and are adequately stored and/ or protected against damage by weather or other causes but which have not at the time of advance been incorporated in the works. When materials on account of which an advance has been made under this sub-clause are incorporated in the work the amount of such advance shall be recovered/ deducted from the next payment made under any of the clause or clauses of this contract.

Such secured advance shall also be payable on other items of perishable nature, fragile and combustible with the approval of the Engineer-in-charge provided the contractor provides a comprehensive insurance cover for the full cost of such materials. The decision of the Engineer-in-charge shall be final and binding on the contractor in this matter. No secured advance, shall however, be paid on high-risk materials such as ordinary glass, sand, petrol, diesel etc.

Clause 10 B (ii): Mobilization Advance:

Mobilization advance not exceeding 10% of the tendered value may be given, if requested by the contractor in writing within one month of the order to commence the work. Such advance shall be in two or more installments to be determined by the Engineer-in- Charge at his sole discretion. The first installment of such advance shall be released by the Engineer-in-charge to the contractor on a request made by the contractor to the Engineer-in-Charge in this behalf. The second and subsequent installments shall be released by the Engineer- in- Charge only after the contractor furnishes a proof of the satisfactory utilization of the earlier installment to the entire satisfaction of the Engineer-in-Charge.

Before any installment of advance is released, the contractor shall execute a Unconditional Bank Guarantee Bond from Scheduled Bank for the amount equal to 110% of the amount of advance and valid for the contract period. This (Unconditional Bank Guarantee from Scheduled Bank for the amount equal to 110% of the balance amount of advance) shall be kept renewed from time to time to cover the balance amount and likely period of complete recovery.

Clause 10 B (iii) Plant Machinery and Shuttering materials advance

An advance for plant, machinery & shuttering material required for the work and brought to site by the Contractor may be given if requested by the contractor in writing within one month of bringing such plant and machinery to site. Such advance shall be given on such plant and machinery which in the opinion of the Engineer-in-charge will add to the expeditious execution of work and improve the quality of work. The amount of advance shall be restricted to 5% percent of the tender value. In the case of new plant and equipment to be purchased for the work, the advance shall be restricted to 90% of the price of such new plant and equipment paid by the contractor for which the contractor shall produce evidence satisfactory to the Engineer-in-Charge. In the case of second hand and used plants and equipment, the amount of such advance shall be limited to 50% of the depreciated value of plant and equipment as may be decided by the Engineer in- Charge. The contractor shall, if so required by the Engineer-in-Charge, submit the statement of value of such old plant and equipment duly approved by a Registered Valuer recognized by the Central Board of Direct Taxes under the Income- Tax Act, 1961. No such advance shall be paid on any plant and equipment of perishable nature and on any plant and equipment of a value less than Rs. 50,000/- Seventy five percent of such amount of advance shall be paid after the plant & equipment is brought to site and balance twenty five percent on successfully commissioning the same. Leasing of equipment shall be considered at par with purchase of equipment and shall be covered by tripartite agreement with the following:

1. Leasing company which gives certificate of agreeing to lease equipment to the contractor .
2. Engineer in Charge, and
3. The contractor.

This advance shall further be subject to the condition that such plant and equipment (a) are considered by the Engineer-in-Charge to be necessary for the works; (b) and are in working order and are maintained in working order; (c) hypothecated to the Government as specified by the Engineer-in-Charge before the payment of advance is released. The contractor shall not be permitted to remove from the site such hypothecated plant and equipment without the prior written permission of the Engineer in- Charge. The contractor shall be responsible for maintaining such plant and equipment in good working order during the entire period of hypothecation failing which such advance shall be entirely recovered in lump sum. For this purpose, steel scaffolding and form work shall be treated as plant and equipment. The contractor shall insure the Plant and Machinery for which mobilization advance is sought and given, for a sum sufficient to provide for their replacement at site. Any amounts not recovered from the insurer will be borne by the contractor.

Clause 10 B (iv) Interest & Recovery

The mobilization advance and plant and machinery advance in (ii) & (iii) above bear simple interest at the rate of 10 per cent per annum and shall be calculated from the date of payment to the date of recovery, both days inclusive, on the outstanding amount of advance. Recovery of such sums advanced shall be made by the deduction from the contractors bills commencing after first ten per cent of the gross value of the work is executed and paid, on pro-rata percentage basis to the gross value of the work billed beyond 10% in such a way that the entire advance is recovered by the time eighty per cent of the gross value of the contract is executed and paid, together with interest due on the entire outstanding amount up to the date of recovery of the installment.

CLAUSE 10C: Payment on account of Increase in Prices/Wages due to Statutory Order

If after submission of the tender, the price of any material incorporated in the works (not being a material supplied from the engineer-in-Charge's stores in accordance with Clause 10 thereof) and/ or wages of labour increases as a direct result of the coming into force of any fresh law, or Statutory rule or order (but not due to any changes in excise, sales tax, VAT etc) and such increase in the price and/or wages prevailing at the time of the last stipulated date for receipt of the tenders including extensions if any for the work, and the contractor thereupon necessarily and properly pays in respect of that material (incorporated in the works) such increased price and/ or in respect of labour engaged on the execution of the work such increased wages, then the amount of the contract shall accordingly be varied and provided further that any such increase shall not be payable if such increase has become operative after the stipulated date of completion of the work in question.

If after submission of the tender, the price of any material incorporated in the works (not being a material supplied from the engineer-in-Charge's stores in accordance with Clause 10 thereof) and/or wages of labour is decreased as a direct result of the coming into force of any fresh law or statutory rules or order (but not due to any changes in sales tax) and such decrease in the prices and/or wages prevailing at the time of receipt of the tender for the work. The Institute shall in respect of materials incorporated in the works (not being materials supplied from the Engineer-in-Charge's stores in accordance with Clause – 10 hereof) and/or labour engaged on the execution of the work after date coming into force of such law statutory rule or order be entitled to deduct from the dues of the contractor, such amount as shall be equivalent to the difference between the prices of the materials and/or wages as prevailed at the time of the last stipulated date for receipt of tenders including extensions if any for the work and the prices of materials and/or wages of labour on the coming into force of such law, statutory rule or order. The Contractor shall, for the purpose of this condition, keep such books of account and other documents as are necessary to show the amount of any increase claimed or reduction available and shall allow inspection of the same by a duly authorized representative of the Institute and further shall, at the request of the engineer-in-Charge may require any documents so kept and such other information as the Engineer-in-Charge may require.

The contractor shall, within a reasonable time of his becoming aware of any alteration in the prices of any such materials and/or wages of labour, give notice thereof to the Engineer-in-Charge stating that the same is given pursuant to this condition together with all information relating thereof which he may be in position to supply.

CLAUSE 10 CA: NOT APPLICABLE

CLAUSE 10 C: NOT APPLICABLE

CLAUSE 10 D

Dismantled Material Institute's Property

The contractor shall treat all materials obtained during dismantling of a structure, of the site for a work, etc. as Institute's property and such materials shall be disposed off to the best advantage of Institute according to the instructions in writing issued by the Engineer-in-Charge

Clause – 11

Work to be executed in accordance with specifications, drawings, orders etc.:-

The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with CPWD Specifications 1996 Vol. I to VI with upto date correction slips and CPWD specifications 1994 for internal electrification and 1995 for external electrification with upto date correction slips. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Engineer-in-charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specifications of Central Public Works Department specified in schedule 'F' or in any Bureau of Indian Standard or any other, published standard or code or, Schedule of Rates or any other printed publication referred to elsewhere in the contract.

The contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

Clause 12

Deviations/Variations Extent and Pricing :- The Director shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Director and such alterations,

omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows:-

- i). In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus.
- ii). 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-charge.

In the case of extra item(s) the contractor may within fifteen days of receipt of order of occurrence of the item(s) claim rates, supported by proper analysis, for the work and the engineer-in-charge shall within one month of the receipt of the claims supported by analysis after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

In the case of substituted items, the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the aforesaid para.

- a) If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted) the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).
- b) If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted) the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so, decreased to the extent of the difference between the market rates of substituted item and the agreement item(to be substituted).

The contractor shall send to the Engineer-in-Charge once every three months an upto date account giving complete details of all claims for additional payments to which the contractor may consider himself entitled and of all additional work ordered by the Engineer-in-Charge which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the Director may authorize consideration of such claims on merits.

Any operation incidental to or necessarily has to be in contemplation of tenderer while filling tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed

to be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

Clause 13

Foreclosure of Contract due to Abandonment or Reduction in Scope of Work:- If at any time after acceptance of the tender, Institute shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not require the whole or any part of the works to be carried out, the Director shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The contractor shall be paid at contract rates full amount for works executed at site and in addition, a reasonable amount as certified by the Engineer-in-charge for the items hereunder mentioned which could not be on the work to the full extent in view of the foreclosure:-

- i). Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks.
- ii). Institute shall have the option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work) provided, however, Institute shall be
- iii). Shall offer or give or agree to give to any person in Institute service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for Institute; or
- iv). Shall enter into a contract with Institute in connection with which commission has been paid or agreed to paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Registrar; or
- v). Shall obtain a contract with Institute as a result of wrong tendering or other non- bonafide methods of competitive tendering; or
- vi). Being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors: or

- vii). Being a company, shall pass a resolution or the Court shall make an order for the winding up of the company, or a receiver or manager on behalf of the debenture holders or otherwise shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or manager ;or
- viii). Shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days; or
- ix). Assigns, transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Accepting Authority:

The Accepting Authority may, without prejudice to any other right or remedy which shall have accrued or shall accrue hereafter to Institute, by a notice in writing to cancel the contract as whole or only such items of work in default from the Contract.

The Registrar shall on such cancellation by the Accepting Authority have powers to :

- a). take possession of the site and any materials, constructional plant, implements, stores etc., thereon; and/or b). carry out the incomplete work by any means at the risk and cost of the contractor.

On cancellation of the contract in full or in part, the Registrar shall determine what amount, if any, is recoverable from the contractor for completion of the works or part of the works or in case the works or part of the works is not to be completed, the loss or damage suffered by Institute. In determining the amount, credit shall be given to the contractor for the value of the work executed by him upto time of cancellation, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor.

Any excess expenditure incurred or to be incurred by Institute in completing the works or part of the works or the excess loss or damages suffered or may be suffered by Institute as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to Institute in law be recovered from any moneys due to the contractor on any account, and if such moneys are not sufficient the contractor shall be called upon in writing and shall be liable to pay the same within 30days.

If the contractor shall fail to pay the required sum within the aforesaid period of 30 days the Director shall have the right to sell any or all of the contractor's unused materials, constructional plant, implements, temporary buildings, etc and apply the proceeds of sale thereof towards the satisfaction of any sums due from the contractor under the contract and if thereafter there be any balance outstanding from the contractor, it shall be recovered in accordance with the provisions of the contract.

Any sums in excess of the amounts due to the Institute and unsold materials, constructional plant, etc. shall be returned to the contractor, provided always that if cost or anticipated cost of completion by Institute of the works or part of the works is less than the amount which the contractor would have been paid had he completed the works or part of the works, such benefit shall not accrue to the contractor.

CLAUSE 14: Carrying out part work at risk and cost of contractor

If contractor:

- (i) At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Engineer-in-Charge; or
- (ii) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after a notice in writing is given in that behalf by the Engineer-in-Charge; or

Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge.

(iii) The Engineer- in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to :

- (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or
- (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.

The Engineer-in-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work/ part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by Government because of action under this clause shall not exceed 10% of the tendered value of the work.

In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same manner and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor.

The certificate of the Engineer-in-Charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the department are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

Any excess expenditure incurred or to be incurred by Government in completing the part work/ part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by Government as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to Government in law or per as agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all of the contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract

In the event of above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him.

Clause-15 Suspension of Work:

- i). The contractor shall, on receipt of the order in writing of the Director, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Director may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons:
 - a). On account of any default on the part of the contractor or
 - b). For proper execution of the works or part thereof for reasons other than the default of the contractor or
 - c). For safety of the works or part thereof

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Director.

- ii). If the suspension is ordered for reasons (b) and (c) in sub-para (I) above:
 - a). The contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25% for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part and:
 - b). If the total period of all such suspensions in respect of an item or group of items or work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Director may consider reasonable in respect of salaries and/ or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2% to cover indirect expenses of the contractor. Provided the contractor submits his claim supported by details to the Director within fifteen days of the expiry of the period of 30days.
 - iii). If the works or part thereof is suspended on the orders of the Director for more than three months at a time, except when suspension is ordered for reason (a) in sub-para (I) above, the contractor may after receipt of such order serve a written notice on the Director requiring permission within fifteen days from receipt by the Director of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by the Institute or where it affects whole of the works, as an abandonment of the works by the Institute, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Director. In the event of the contractor treating the suspension as an abandonment of the contract by the Institute, he shall have no claim to payment of any compensation on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Director may consider reasonable, in respect of salaries and/ or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover

indirect expenses of the contractor provided the contractor submits his claim supported by details to the Director within 30 days of the expiry of the period of 3months.

Clause 16

Action in case work not done as per specifications:- All works under or in course of execution or executed in pursuance of the contract shall at all times be open and accessible to the inspection and supervision of the Director, his authorised subordinates in charge of the work / architect and all the superior officers of the Institute and the Chief Technical examiner's office, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself. If it shall appear to the Engineer-in-charge or his authorised subordinates in-charge of the work or to the Architect or the Chief Technical Examiner or his subordinate officers, that any work has been executed with unsound, imperfect or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract the contractor shall, on demand in writing which shall be made within six months of the completion of the work from the Engineer-in-charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 2 of the contract (for non-completion of the work in time) for this default.

In such case the Engineer-in-charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the Director may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/ or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Director to be conveyed in writing in respect of the same will be final and binding on the contractor.

Clause – 17

Contractor Liable for damages, defects during defect liability period:- If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road curb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work

or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever of if any defect, shrinkage or other faults appear in the work within **twelve months** after a certificate final or otherwise its completion shall have been given by the EIC as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of **twelve months** after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later.

Clause 18

Contractor to Supply Tools & Plants etc. :- The contractor shall provide at his own cost all materials, plant, tools, appliances, implements, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specification or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage thereof to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighing and assisting the measurement for examination at any time and from time to time of the work or materials. Failing his so doing the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and/or from his security deposit or the proceeds of sale thereof, or of a sufficient portions thereof.

Clause 18A

Recovery of compensation paid to workman:- In every case in which by virtue of the provisions sub-section (1) of section 12, of the Workmen's Compensation Act, 1923, Institute is obliged to pay compensation to a workman employed by the contractor, in execution of the works, Institute will recover from the contractor for the amount of the compensation so paid ; and, without prejudice to the rights of the Institute under sub-section (2) of Section 12, of the said Act, Institute shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by Institute to the contractor whether under this contract or otherwise. Institute shall not be bound to contest any claim made against it under sub-section (1) Section 12, of the said Act, except on the written request of the contractor and upon his giving to Institute full security for all costs for which Institute might become liable in consequence of contesting such claim.

Clause 18 B

Ensuring Payment and Amenities to Workers if Contractor fails:- In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and of the Contract Labour (Regulation and Abolition) Central Rules, 1971, Institute is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act the Rules framed by Institute from time to time for the protection of health and sanitary arrangements for workers employed by Institute Contractors, Institute will recover from the contractor the amount of wages so paid or the amount of expenditure so incurred, and without prejudice to the rights of the Institute under sub-section (2) of Section 20 and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, Institute shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by Institute to the contractor whether under this contract or otherwise. Institute shall not be bound to contest any claim made against it under sub-section (1) of Section 20, sub-section (4) of Section 21, of the said Act, except on the written request of the contractor and upon his giving to the Institute full security for all costs for which Institute might become liable in contesting such claim.

Clause 19

Labour Laws to be complied by the Contractor:- - The contractor shall obtain a valid licence under the Contract Labour (R & A) Act 1970, and the Contract Labour (Regulation and Abolition) Central Rules 1971, before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also abide by the Provisions of Child Labour (prohibition and Regulation) Act, 1986.

The contractor shall also comply with the provisions of the building and other construction workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Welfare Cess Act, 1996. The Contractor shall also abide the provisions of Contract Labour (Regulations and Abolition) Act 1970 and the Contract Labour Regulation & Abolition Central Rules 1971.

Any failure to fulfil this requirement shall attract the penal provisions of this contract arising out of the resultant non-execution of the work. The Contractor shall also abide by the provisions of child labour (Prohibition and Regulations) Act, 1986.

Clause 19A

No labour below the age of fourteen years shall be employed on the work.

Clause 19B: Payment of Wages

Payment of wages:

(i) The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the

(ii) The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.

(iii) In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with the Central Public Works Department contractor's Labour Regulations made by Government from time to time in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions unauthorizedly made, maintenance of wage books or wage slips publication of scale of wage and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable

(iv) (a) The Engineer-in-Charge concerned shall have the right to deduct from the moneys due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the Regulations.

(b) Under the provision of Minimum Wages (Central) Rules, 1950, the contractor is bound to allow to the labours directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labours and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned.

In the case of Union Territory of Delhi, however, as the all inclusive minimum daily wages fixed under Notification of the Delhi Administration No.F.12(162)MWO/DAB/ 43884-91, dated 31-12-1979 as amended from time to time are inclusive of wages for the weekly day of rest, the question of extra payment for weekly holiday would not arise.

(v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rules made there under from time to time.

(vi) The contractor shall indemnify and keep indemnified Government against payments to be made under and for the observance of the laws aforesaid and the C.P.W.D. Contractor's Labour Regulations without prejudice to his right to claim indemnity from his sub-contractors.

(vii) The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.

(viii) Whatever is the minimum wage for the time being, or if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.

(ix) The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.

Clause 19 C

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his own expense arrange for the safety provisions as per C.P.W.D. Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement

and provide necessary facilities as aforesaid, he shall be liable to pay a penalty of as decided by the authority mentioned in Schedule F for each default and in addition, the Engineer-in- Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

Clause 19D

The contractor shall submit by the 4th and 19th of every month, to the Engineer-in-Charge, a true statement showing in respect of the second half of the preceding month and the first half of the current month respectively:-

- (1) the number of labourers employed by him on the work,
- (2) their working hours,
- (3) the wages paid to them,
- (4) the accidents that occurred during the said for night showing the circumstances under which they happened and the extent of damage and injury caused by them, and
- (5) the number of female workers who have been allowed maternity benefit according to Clause 19F and the amount paid to them.

Failing which the contractor shall be liable to pay to Government, a sum as decided by the authority mentioned in Schedule F for each default or materially incorrect statement. The decision of the Divisional Officer shall be final in deducting from any bill due to the contractor, the amount levied as fine and be binding on the contractor.

Clause 19E

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by the Central Public Works Department and its contractors.

Clause 19F

Leave and pay during leave shall be regulated as follows:-

1. Leave :

- (i) in the case of delivery - maternity leave not exceeding 8 weeks, 4 weeks up to and including the day of delivery and 4 weeks following that day,
- (ii) in the case of miscarriage - upto 3 weeks from the date of miscarriage.

2. Pay :

- (i) in the case of delivery - leave pay during maternity leave will be at the rate of the women's average daily earnings, calculated on total wages earned on the days when full time work was done during a period of three months immediately preceding the date on which she gives notice that she expects to be confined or at the rate of Rupee one only a day whichever is greater.
- (ii) in the case of miscarriage - leave pay at the rate of average daily earning calculated on the total wages earned on the days when full time work was done during a period of three months immediately preceding the date of such miscarriage.

3. Conditions for the grant of Maternity Leave:

No maternity leave benefit shall be admissible to a woman unless she has been employed for a total period of not less than six months immediately preceding the date on which she proceeds on leave.

4. The contractor shall maintain a register of Maternity (Benefit) in the Prescribed Form as shown in appendix -I and II, and the same shall be kept at the place of work.

Clause 19G

In the event of the contractor(s) committing a default or breach of any of the provisions of the Central Public Works Department, Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for the workers as amended from time to time or furnishing any information or submitting or filing any statement under the provisions of the above Regulations and' Rules which is materially incorrect, he/they shall, without prejudice to any other liability, pay to the Government a sum as decided by the authority mentioned in Schedule F for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractor(s) defaulting continuously in this respect, the penalty may be enhanced to as decided by the authority mentioned in Schedule F per day for each day of default subject to a maximum of 5 percent of the estimated cost of the work put to tender. The decision of the Engineer-in-Charge shall be final and binding on the parties.

Should it appear to the Engineer-in-Charge that the contractor(s) is/are not properly observing and complying with the provisions of the C.P.W.D. Contractor's Labour Regulations and Model Rules and the provisions of the Contract Labour (Regulation and Abolition) Act 1970, and the Contract Labour (R& A) Central Rules 1971, for the protection of health and sanitary arrangements for work-people employed by the contractor(s) (hereinafter referred as "the said Rules") the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the work-people within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and/observe the said Rules and to provide the amenities to the work-people as aforesaid, the Engineer-in-Charge shall have the power to provide the amenities hereinbefore mentioned at the cost of the contractor(s). The contractor(s) shall erect, make and maintain at his/their own expense and to approved standards all necessary huts and sanitary arrangements required for his/their work-people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said huts and sanitary arrangements be remodelled and/or reconstructed according to approved standards, and if the contractor(s) shall fail to remodel or reconstruct such huts and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer-in-Charge shall have the power to remodel or reconstruct such huts and sanitary arrangements according to approved standards at the cost of the contractor(s).

Clause 19H

The contractor(s) shall at his/their own cost provide his/their labour with a sufficient number of huts (hereinafter referred to as the camp) of the following specifications on a suitable plot of land to be approved by the Engineer-in-Charge.

(i)

(a) The minimum height of each hut at the eaves level shall be 2.10m (7 ft.) and the floor area to be provided will be at the rate of 2.7 sq.m. (30 sq.ft.) for each member of the worker's family staying with the labourer.

(b) The contractor(s) shall in addition construct suitable cooking places having a minimum area of 1.80m x 1.50m (6' x5') adjacent to the hut for each family.

(c) The contractor(s) shall also construct temporary latrines and urinals for the use of the labourers each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women.

(d) The contractor(s) shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitably screened.

(ii)

(a) All the huts shall have walls of sun-dried or burnt-bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer-in-Charge. In case of sun-dried bricks, the walls should be plastered with mud gobri on both sides. The floor may be kutchra but plastered with mud gobri and shall be at least 15 cm (6") above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge and the contractor shall ensure that throughout the period of their occupation, the roofs remain water-tight.

(b) The contractor(s) shall provide each hut with proper ventilation.

(c) All doors, windows, and ventilators shall be provided with suitable leaves for security purposes.

(d) There shall be kept an open space of at least 7.2m (8 yards) between the rows of huts which may be reduced to 6m (20 ft.) according to the availability of site with the approval of the Engineer-in-Charge. Back to back construction will be allowed.

(iii) **Water Supply** - The contractor(s) shall provide adequate supply of water for the use of labourers. The provisions shall not be less than two gallons of pure and wholesome water per head per day for drinking purposes and three gallons of clean water per head per day for bathing and washing purposes. Where piped water supply is available, supply shall be at stand posts and where the supply is from wells or river, tanks which may be of metal or masonry, shall be provided. The contractor(s) shall also at his/ their own cost make arrangements for laying pipe lines for water supply to his/ their labour camp from the existing mains wherever available, and shall pay all fees and charges therefore.

(iv) The site selected for the camp shall be high ground, removed from jungle.

(v) **Disposal of Excreta** - The contractor(s) shall make necessary arrangements for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the Local Health Authorities. If trenching or incineration is not allowed, the contractor(s) shall make arrangements for the removal of the excreta through the Municipal Committee/authority and inform it about the number of labourers employed so that arrangements may be made by such Committee/authority for the removal of the excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality/authority. The contractor shall provide one sweeper for every eight seats in case of dry system.

(vi) **Drainage** - The contractor(s) shall provide efficient arrangements for draining away sullage water so as to keep the camp neat and tidy.

(vii) The contractor(s) shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.

(viii) **Sanitation** - The contractor(s) shall make arrangements for conservancy and sanitation in the labour camps according to the rules of the Local Public Health and Medical Authorities.

Clause 19I

The Engineer-in-Charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors' employ upon the work who may be incompetent or misconduct himself and the contractor shall forthwith comply with such requirements. In respect of maintenance/repair or renovation works etc. where the labour have an easy access to the individual houses, the contractor shall issue identity cards to the labourers, whether temporary or permanent and he shall be responsible for any untoward action on the part of such labour. AE/JE will display a list of contractors working in the colony/Blocks on the notice board in the colony and also at the service centre, to apprise the residents about the same

Clause 19J

It shall be the responsibility of the contractor to see that the building under construction is not occupied by anybody unauthorized during construction, and is handed over to the Engineer-in-

Charge with vacant possession of complete building. If such building though completed is occupied illegally, then the Engineer-in-Charge shall have the option to refuse to accept the said building/buildings in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay, a levy upto 5% of tendered value of work may be imposed by the Superintending Engineer whose decision shall be final both with regard to the justification and quantum and be binding on the contractor.

However, the Superintending Engineer, through a notice, may require the contractor to remove the illegal occupation any time on or before construction and delivery.

Clause 19 K

Employment of skilled/semi-skilled workers

The contractor shall, at all stages of work, deploy skilled/semi-skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/Industrial Training Institute/ National Institute of construction Management and Research (NICMAR)/ National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled/semi-skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer in charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer-in- Charge. Failure on the part of contractor to obtain approval of Engineer-in-Charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate of Rs. 100 per such tradesman per day. Decision of Engineer in Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding. Provided always, that the provisions of this clause, shall not be applicable for works with estimated cost put to tender being less than Rs. 5 crores.

For work costing more than Rs. 10 Crores, and upto Rs 50 Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 20% of the unskilled workers engaged in the project in co-ordination with the CPWD Regional Training Institute & National Skill Development Corporation (NSDC) for certification at the level of skilled/semi-skilled tradesmen.

Clause 19 L

Contribution of EPF and ESI

The ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor..

Clause 20

Minimum Wages Act to be complied with:

The Contractor shall comply with all the provision of the Minimum Wages Act, 1948, amended from time to time and rules framed thereunder and other labour laws affecting contract labour that may be brought from time to time.

Clause 21

Work not to be sublet. Action in case of insolvency: The Contract shall not be assigned or sublet without the written approval of the Registrar. And if the

contractor shall assign or sublet his contract, or attempt to do so or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise shall either directly or indirectly be given, promised or offered by the contractor, or any of his servants or agent to any public officer or persons in the employ of Institute in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Registrar on behalf of the Board of Governors of the Institute shall have power to adopt any of the courses specified in Clause 3 hereof as he may deem best suited to the interest of the Institute and in the event of any of these courses being adopted the consequences specified in the said Clause 3 shall ensure.

CLAUSE 22 :

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of the Institute without reference to the actual loss or damage sustained, and whether or not any damage shall have been sustained.

CLAUSE 23

Changes in firm's constitution to be intimated: Where the Contractor is a partnership firm, the previous approval in writing, of the Director shall be obtained before any change is made in the constitution of the firm. Where the Contractor is an individual or a Hindu undivided family business concern, such approval as aforesaid, shall likewise, be obtained before the Contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the work hereby undertaken by the Contractor. If previous approval, aforesaid, is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken and the same consequences shall ensue as provided in the said Clause 21.

CLAUSE 24

Directions for execution of works: All works to be executed under the contract shall be executed under the direction and subject to the approval of the Director of the Institute who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

CLAUSE 25

Settlement of Disputes & Arbitration: If any dispute or difference of any kind whatsoever arises between the parties in connection with the agreement including any question regarding its existence, validity or termination, the parties shall try to resolve the same by mutual discussions, failing which such disputes or difference shall be referred to the courts of competent jurisdiction and the courts of Patna shall have exclusive jurisdiction on matter relating to this agreement.

Except where otherwise provided in the contract all questions and all disputes relating to the meaning of the specification, design, drawings and instructions here – in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be referred for adjudication through arbitration by a sole arbitrator appointed by the Director of Institute or if there be no Director of the Institute .If the arbitrators appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

It is a term of this contract that the party invoking Arbitration shall give a list of disputes with amounts claimed in respect of each such dispute along with the notice for appointment of arbitrator and giving reference to the rejection by the Director of the Institute of the appeal.

It is also a term of this contract that no person other than a person appointed by such Director of the Institute or the administrative head as aforesaid should act as arbitrator and if for any reason that is not possible, the matter shall not be referred to arbitration at all.

It is also a term of this contract that if the contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 120 days of receiving the intimation from the Engineer-in-Charge that the final bill is ready for payment, the claim of the contractor shall be deemed to have been waived and absolutely barred and the Institute shall be discharged and released of all liabilities under the contract in respect of these claims.

The arbitration shall be conducted in accordance with the provisions of the Arbitration and conciliation Act. 1996, (26 of 1996) or any statutory modifications or re-enactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceeding under this clause.

It is also a term of this contract that the arbitrator shall adjudicate on only such disputes as are referred to him by the appointing authority and give separate award against each dispute and claim referred to him and, in all cases, where the total amount of the claims by any party exceeds Rs.1,00,000/- the arbitrator shall give reasons for the award.

It is also a term of the contract that if any fees are payable to the arbitrator these shall be paid equally by both the parties.

It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the Arbitrator in his sole discretion. The fees, if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any, of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner such costs or any part thereof shall be paid and fix or settle the amount of costs to be so paid.

CLAUSE 26

Contractor to Indemnify Institute against patent Rights: The Contractor shall fully indemnify and keep indemnified the Board of Governors of the Institute against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part of thereof included in the Contract. In the event of any claims made under or action brought against Institute in respect of any such matter as aforesaid the Contractor shall be immediately notified thereof and the Contractor shall be at liberty at his own expense, to settle any dispute or to conduct any litigation that may arise therefrom. Provided that the Contractor shall not be liable to indemnify the Board of Governors of the Institute if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer in Charge in this behalf.

CLAUSE 27: Deleted

CLAUSE 28

Action where no specifications are Specified: In case of any class of work for which there is no such specifications as referred to in Clause 11, such work shall be carried out in accordance with the Bureau of Indian Standard Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturer's specifications, if not available then as per District Specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-Charge.

CLAUSE 29

With-holding and lien in respect of Sums due from Contractor: (i) Whenever any claim, for payment of a sum of money arises out of or under the contract or against the contractor, the Institute shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Institute shall be entitled to withhold the security deposit, if any furnished as the case may be and also have alien over the same pending finalization or adjudication of any such claim

.Intheeventofthesecurity being insufficient to cover the claimed amount or amounts or if no security has been taken from the Contractor, the Institute shall be entitled to withhold and have lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the Director pending finalization of adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Institute will be kept withheld or retained as such by the Institute till the claim arising out of or under the contract is determined by the arbitrator (if the contract is governed by the arbitration clause) by the competent court, as the case may be and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause where the contractor is a partnership firm or a limited company, the Institute shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/ limited company as the case may be, whether in his individual capacity or otherwise.

- (i) Institute shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract etc. to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been over paid in respect of any work done by the contractor under the contractor any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over- payment and it shall be lawful for Institute to recover the same from him in the manner prescribed in sub- clause(i) of this clause or in any other manner legally permissible and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by Institute to the contractor, without any interest thereon whatsoever.

Provided that the Institute shall not be entitled to recover any sum overpaid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the Institute on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the Engineer-in-Charge.

CLAUSE 29A

Lien in respect of claims in other Contracts: Any sum of money due and payable to the Contractor (including security deposit returnable to him) under this contract may be withheld or retained by way of lien by the Institute or any other

contracting person or persons through Engineer-in-Charge against any claim of the Institute or such other person or persons in respect of payment of a sum of money arising out of or under any other Contract made by the Contractor with the Institute or with such other person or persons.

It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Institute will be kept withheld or retained as such by the Institute or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

CLAUSE 30: Deleted

CLAUSE 31: Deleted

Unfiltered Water supply: The Contractor(s) shall make his/ their own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the condition that the water used by the contractor(s) shall be fit for construction purposes. If contractor will used water of IIT Patna then deduction @1% of the bill amount will be made from their payment.

CLAUSE 32: Deleted

CLAUSE 33: Deleted

CLAUSE 34: Deleted

CLAUSE 35: Deleted

CLAUSE 36:

Employment of technical staff and employees Contractors Superintendence, Supervision, Technical Staff & Employees. The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer-In-Charge, the names, qualifications, experience, age, addresses and other particulars along with certificates of the principal technical representative to be in charge of the work and other technical representative who will be supervising the work. Minimum requirement of such technical representative and their qualifications and experience shall not be lower than specified in schedule F. The Engineer-In-Charge shall within 3 days of receipt of such communication intimate in writing his approval or otherwise of such a representative to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical

representative and other technical representative shall be appointed by the contractor soon after receipt of the approval from Engineer-In-Charge and shall be available at site before start of work.

All the provisions applicable to the principal technical representative under the clause will also be applicable to other technical representative. The principal technical works for supervision at all times when any construction activity is in progress and also present him/ themselves as required, to the Engineer-In-Charge and or his designated representative to take instruction. Instructions given to the principal the same force as if these have been given to the contractor. The principal technical representative and other technical representative shall be actually available at site fully during all stages of execution of work, during recording/ checking/ test checking of measurements of works and whenever so required by the Engineer-In-Charge and shall also note down instructions conveyed by the Engineer-In-Charge or his designated representatives in the site order book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements look after any other work. Substitutes, duly approved by Engineer-In-Charge of the work in similar manner as aforesaid shall be provided in event of absence of any of the representative by more than two days. If the Engineer-In-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative is effectively appointed or is effectively attending or fulfilling the provision of this clause, a recovery (non-refundable) shall be effected from the contractor as specified in Schedule 'F' and the decision of the Engineer-In-Charge as recorded in the site order book and measurement recorded checked/ test checked in measurement books shall be final and binding on the contractor. Further if the contractor fails to appoint suitable technical principal technical representative and or other technical representatives and if such without duly approved substitute or do not discharge their responsibilities satisfactorily, the Engineer-In-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative is appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative along with every on-account bill/ final bill and shall produce evidence if at any time so required by the Engineer-In-Charge. The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work. The contractor shall provide and employ skilled, semiskilled and unskilled labour as is necessary for proper and timely execution of the work. The Engineer-In-Charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-In-Charge to be undesirable. Such person shall not be employed again at works site without

the written permission of the Engineer-In-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

CLAUSE 37: Levy/Taxes payable by Contractor.

1. All Direct/Indirect Tax in respect of this contract shall be payable by the Contractor and Institute shall not entertain any claim whatsoever in this respect.
2. The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities.
3. If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the Institute to the State Government, Local authorities in respect of any material used by the contractor in the works then in such a case, it shall be lawful to the Institute and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.

CLAUSE 38: Conditions for reimbursement of levy/taxes if levied after receipt of Tenders

(i) All tendered rates shall be inclusive of any tax, levy or cess applicable on last stipulated date of receipt of tender including extension if any. No adjustment i.e. increases or decrease shall be made for any variation in the rate of GST, Building and Other Construction Workers Welfare Cess or any tax, levy or cess applicable on inputs.

However, effect of variation in rates of GST or Building and Other Construction Workers Welfare Cess or imposition or repeal of any other tax, levy or cess applicable on output of the works contract shall be adjusted on either side, increase or decrease.

Provided further that for Building and Other Construction Workers Welfare Cess or any tax (other than GST), levy or cess varied or imposed after the last date of receipt of tender including extension if any, any increase shall be reimbursed to the contractor only if the contractor necessarily and properly pays such increased amount of taxes/levies/cess.

Provided further that such increase including GST shall not be made in the extended period of contract for which the contractor alone is responsible for delay as determined by authority for extension of time under Clause 5 in Schedule F.

- (ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of the Government and/or the Engineer-in-Charge and shall also furnish such other information/document as the Engineer-in-Charge may require from time to time.
- (iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy or cess, or variation or repeal of such tax or levy or cess give a written notice thereof to the Engineer-in-charge that the same is given pursuant to this condition, together with all necessary information relating thereto

CLAUSE 39:

Termination of Contract on death of contractor

Without prejudice to any of the rights or remedies under this contract if the contractor dies, the Director on behalf of the Board of Governors of the Institute

shall have the option of terminating the contract without compensation to the contractor.

CLAUSE 40 : If relative working in IIT then the contractor not allowed to tender

The contractor shall not be permitted to bid for works in the IIT (responsible for award and execution of contracts), in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). 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 IIT or in the Ministry of Human Recourses & Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of IIT.

NOTE: By the term “near relatives” is meant wife, husband, parents and grandparents’ children and grandchildren, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

CLAUSE 41:

No Gazetted Engineer to work as contractor within one year of retirement

No engineer of gazetted rank or other gazetted officer employed in engineering of administrative duties in an engineering department of the Government of India shall work as a contractor or employee of a contractor for a period of one year after his retirement from government service without the previous permission of Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of Government of India as aforesaid, before submission of the tender or engagement in the contractor’s service, as the case maybe.

CLAUSE 42: Theoretical Conception of materials

(i) After completion of the work and also at any intermediate stage in the event of Non reconciliation of materials issued theoretical quantity of materials used in the work shall be calculated on the basis and method given hereunder:-

(a) Quantity of cement & bitumen shall be calculated on the basis of quantity of cement & bitumen required for different items of work as shown in the Schedule of Rates mentioned in Schedule ‘F’. In case any item is executed for which standard constants for the consumption of cement or bitumen are not available in the above mentioned schedule/statement or cannot be derived from the same shall be calculated on the basis of standard formula to be laid down by the Engineer-in-Charge.

(b) Theoretical quantity of steel reinforcement or structural steel sections shall be taken as the quantity required as per design or as authorized by Engineer-in-Charge, including authorized lappages, chairs etc. plus 3% wastage due to cutting into pieces, such theoretical quantity being determined and compared with the actual issues each diameter wise, section wise and category wise separately.

(c) Theoretical quantity of G.I. & C.I. or other pipes, conduits, wires and cables, pig lead and G.I./M.S. sheets shall be taken as quantity actually required and measured plus 5% for wastage due to cutting into pieces (except in the case of G.I./M.S. sheets it shall be 10%), such determination & comparison being made diameter wise & category wise.

(d) For any other material as per actual requirements.

(ii) Over the theoretical quantities of materials so computed a variation shall be allowed as specified in Schedule 'F'.

For non scheduled items, the decision of the Superintending Engineer regarding theoretical quantities of materials which should have been actually used, shall be final and binding on the contractor.

(iii) The said action under this clause is without prejudice to the right of the Government to take action against the contractor under any other conditions of contract for not doing the work according to the prescribed specifications.

CLAUSE 43

Compensation during warlike situations: The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer-in-Charge and a certificate from him to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Engineer-in-Charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-Charge, such payments being in addition to compensation upto the value of the work originally executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by Engineer-in- Charge. The contractor shall be paid for the damages/ destruction suffered and for the restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in-Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations(a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the A.R.P. Officers or the Engineer-in-Charge. (b) for any material etc. not on the site of the work or for any tools, plant, machinery scaffolding, temporary building and other things not intended for the work.

In the event of the contractor having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as is considered reasonable by the Registrar.

CLAUSE 44:

Apprentices act provisions to be compiled with

The contractor shall comply with the provisions of the Apprentices Act,1961 and the rules and orders issued there under from time to time. If he fails to do so, his failure will be breach of the contractor and the Registrar may in his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said act.

CLAUSE 45

Release of Security deposit after labour clearance.: Security Deposit of the work shall not be refunded till the contractor produces a clearance certificate from the Labour Officer. As soon as the work is virtually complete the contractor shall apply for the clearance certificate to the Labour Officer under intimation to the Engineer-in-Charge. The Engineer in charge on receipt of the said communication shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, or recorded till after 3 months after completion of the work and/ or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Security Deposit will be released if otherwise due.

Clause 46: Insurance:

The agency shall include storage cum erection insurance including third party insurance right from the storage to commissioning and handing over of various equipment. In insurance, the beneficiary shall be Engineer -In-charge at the cost of the agency. All insurance which the agency is required to enter into under the contract shall be affected any authorized general insurance company and the agency shall produce the policies of insurance. In case of any delay in ITC & handing over, the insurance cover will be suitably extended by the contractor at his own cost.

Remedy of failure to insure:

If the agency fails to effect and keep in force the insurance referred to in the preceding sub-clause the department may effect and keep in force any such insurance and pay such premium as may be necessary for that purpose and from time to time deduct the amount, so paid by the department, from any money due or which may become due to bids or recover the same as debit from the agency's bill.

Quality of material and workmanship:

All parts of the equipment shall be of such design, size and material so as to function satisfactorily under all rated conditions of operation. All components of the equipment shall have adequate factor of safety. The work of fabrication and

assembly shall conform to sound engineering practice and on the basis of “Fail Safe Design”. The mechanical parts subject to wear and tear shall be easily replaceable type. The construction of the equipment shall be such as to facilitate easy operation, inspection, maintenance and repairs. All connections and contacts shall be designed to minimize risk of accidental short circuits caused by animals, birds and vermin etc. All identical items and their component parts should be completely, interchangeable including spare parts.

Inspection and testing at site:

The installation shall be subject to necessary inspection during every stage of erection, by the Engineer In-charge or his authorized representative. The successful bidder shall provide all facilities and assistance for the purpose.

The completed installation shall be inspected and tested by the Engineer-in charge in the manner as will be laid down by him, in consultation the agency.

All instruments and facilities necessary for the tests shall be provided by the agency.

Safety Code :

1. Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well as suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 (1/4 horizontal and 1 vertical)
2. Scaffolding of staging more than 3.6m (12 ft) above the ground or floor, swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm (3ft) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends there of with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent if from swaying from the building or structure.
3. Working platform, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6 (12ft) above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2)above.
4. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90cm(3ft).
5. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m (30ft) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. (11 $\frac{1}{2}$ ”) for ladder upto and including 3m (10ft) in length. For longer ladders

- this width should be increased at least ¼” for each additional 30cm (1foot) of length. Uniform step spacing of not more than 30cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defiance of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit, action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.
6. Excavation and Trenching - All trenches 1.2m (4ft) or more in depth, shall at all times be supplied with the least one ladder for each 30m (100ft) in length or fraction thereof Ladder shall extend from bottom of the trench to at least 90 cm (3ft) above the surface of the ground. The side of the trenches which are 1.5m (5ft) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5m (5ft) of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.
 - Demolition – Before any demolition work is commenced and also during the progress of the work,
 - All roads and open areas adjacent to the work site shall either be closed or suitably protected.
 - No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.
 - All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.
 7. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned. The following safety equipment shall invariably be provided:
 - i). Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
 - ii). Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes shall be provided with protective goggles.
 - iii). Those engaged in welding works shall be provided with welder’s protective eye shields.
 - iv). Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
 - v). When workers are employed in sewers and manholes, which are in active use, the contractor shall ensure that the manholes are opened and ventilated at least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards

- to prevent accident to the public. In addition, the contractor shall ensure that the following safety measure are adhered to:
- a). Entry for workers into the line shall not be allowed except under supervision of the Engineer-in-charge or any other higher officer.
 - b). At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.
 - c). Before entry presence of Toxic gases should be tested by inserting wet lead acetate paper which changes color in the presence of such gases and gives indication of their presence.
 - d). Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.
 - e). Safety belt with rope should be provided to the workers. While working inside the manholes such rope should be handled by two men standing outside to enable him to be pulled out during emergency.
 - f). The area should be barricaded or cordoned of by suitable means to avoid mishaps of any kind. Proper warning signs, the work in progress board / red flag and red light etc., shall be provided at the site/ be displayed for the safety of the public whenever cleaning works are undertaken during night or day.
 - g). No smoking or open flames shall be allowed near the blocked manhole being cleaned.
 - h). The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.
 - i). Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer- in-Charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.
 - j). Gas masks with Oxygen Cylinder should be kept at site for use in emergency.
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- j). Air-blowers should be used for flow of fresh air through the manholes. Whenever called for portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 metres away for the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.
 - k). The workers engaged for cleaning the manholes/ sewers should be properly trained before allowing them to work in a hole.
 - l). The workers shall be provided with Gumboots or non sparking shoes bump helmets and gloves non sparking tools safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.
 - m). Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.
 - n). If a man received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.

- o). The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps to be taken in this regard in an individual case well be final.
- vi). The Contractor shall not employ men and women below the age of 18 years on the work Wherever men above the age of 18 are employed on the work of lead painting, the following precaution should be taken: -
 - a). No paint containing lead or lead products shall be used except in the form of paste or Ready made paint.
 - b). Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scraped.
 - c). Overalls shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and on the cessation of work.
- 8. An additional clause (viii) (i) of Safety Code (iv) the Contractor shall not employ women and man below the age of 18 on the work of painting with product containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following principles must be observed for such use:
 - i). While lead, sulphate of lead or product containing these pigment, shall not be used in painting operation except in the form of pastes or paint ready for use.
 - ii). Measures shall be taken, wherever required in order to prevent danger arising from the application of a paint in the form of spray.
- i). Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.
 - iv). Adequate facilities shall be provided to enable working painters to wash during and on cessation of work. v). Overall shall be worn by working painters during the whole of working period.
 - vi). Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.
 - vii). Cases of lead poisoning and suspected lead poisoning shall be notified and shall be subsequently verified by medical man appointed by competent authority of Institute.
Institute may require, when necessary medical examination of workers.
 - viii). Instruction with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.
- 9. When the work is done near any place where there is risk of drowning, all necessary equipment should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.
- 10. Use of hoisting machines and tackle including their attachment, anchorage and supports shall conform to the following standards or conditions:-
 - i). a). These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.

- b). Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
- ii). Every crane driver or hoisting appliance operator, shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.
 - iii). In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
 - iv). The contractors shall notify the safe working load of their machines to the Engineer-in-charge whenever he brings any machinery to site of work and get it verified by the Engineer-in-charge.
11. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations, which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots and may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.
 12. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.
 13. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place of work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.
 14. To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer or Engineer-in-charge or their representatives.
 15. Notwithstanding the above clauses from (1) to (15) there is nothing in these to exempt the contractor from the operations of any other Act or Rules in force in the Republic of India.

Model Rules for the Protection of Health and Sanitary Arrangements for Workers Employed by IITP or its Contractors

1. APPLICATION

These rules shall apply to all buildings and construction works in charge of Central Public Works Department/ PWD (DA) in which twenty or more workers are ordinarily employed or are proposed to be employed in any day during the period during which the contract work is in progress.

2. DEFINITION

Work place means a place where twenty or more workers are ordinarily employed in connection with construction work on any day during the period during which the contract work is in progress.

3. FIRST-AID FACILITIES

(i) At every work place, there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.

(ii) The first-aid box shall be distinctly marked with a red cross on white back ground and shall contain the following equipment:-

(a) For work places in which the number of contract labour employed does not exceed 50-

Each first-aid box shall contain the following equipment's :-

1. 6 small sterilized dressings.
2. 3 medium size sterilized dressings.
3. 3 large size sterilized dressings.
4. 3 large sterilized burn dressings.
5. 1 (30 ml.) bottle containing a two per cent alcoholic solution of iodine.
6. 1 (30 ml.) bottle containing sal volatile having the dose and mode of administration indicated on the label.
7. 1 snakebite lancet.
8. 1 (30 gms.) bottle of potassium permanganate crystals.
9. 1 pair scissors.
10. 1 copy of the first-aid leaflet issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.
11. 1 bottle containing 100 tablets (each of 5 gms.) of aspirin.
12. Ointment for burns.
13. A bottle of suitable surgical antiseptic solution.

(b) For work places in which the number of contract labour exceed 50. Each first-aid box shall contain the following equipments.

1. 12 small sterilised dressings.
2. 6 medium size sterilised dressings.
3. 6 large size sterilised dressings.
4. 6 large size sterilised burn dressings.
5. 6 (15 gms.) packets sterilised cotton wool.
6. 1 (60 ml.) bottle containing a two per cent alcoholic solution iodine.
7. 1 (60 ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label.
8. 1 roll of adhesive plaster.
9. 1 snake bite lancet.
10. 1 (30 gms.) bottle of potassium permanganate crystals.
11. 1 pair scissors.
12. 1 copy of the first-aid leaflet issued by the Director General Factory Advice Service and Labour Institutes /Government of India.
13. A bottle containing 100 tablets (each of 5 gms.) of aspirin.
14. Ointment for burns.
15. A bottle of suitable surgical antiseptic solution.

(iii) Adequate arrangements shall be made for immediate recoupment of the equipment when necessary.

(iv) Nothing except the prescribed contents shall be kept in the First-aid box.

(v) The first-aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.

(vi) A person in charge of the First-aid box shall be a person trained in First-aid treatment in the work places where the number of contract labour employed is 150 or more.

(vii) In work places where the number of contract labour employed is 500 or more and hospital facilities are not available within easy distance from the works. First-aid posts shall be established and run by a trained compounder. The compounder shall be on duty and shall be available at all hours when the workers are at work.

(viii) Where work places are situated in places which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or person suddenly taken ill to the nearest hospital.

4. DRINKING WATER

(i) In every work place, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.

(ii) Where drinking water is obtained from an intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.

(iii) Every water supply or storage shall be at a distance of not less than 50 feet from any latrine drain or other source of pollution. Where water has to be drawn from an existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and waterproof.

(iv) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

5. WASHING FACILITIES

(i) In every work place adequate and suitable facilities for washing shall be provided and maintained for the use of contract labour employed therein.

(ii) Separate and adequate cleaning facilities shall be provided for the use of male and female workers.

(iii) Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition.

6. LATRINES AND URINALS

(i) Latrines shall be provided in every work place on the following scale namely :-

a) Where female are employed, there shall be at least one latrine for every 25 females.

b) Where males are employed, there shall be at least one latrine for every 25 males.

Provided that, where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females as the case may be upto the first 100, and one for every 50 thereafter.

(ii) Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.

(iii) Construction of latrines: The inside walls shall be constructed of masonry or some suitable heat-resisting nonabsorbent materials and shall be cement washed inside and outside at least once a year, Latrines shall not be of a standard lower than borehole system.

(iv) (a) Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers "For Men only" or "For Women Only" as the case may be.

(b) The notice shall also bear the figure of a man or of a woman, as the case may be.

(v) There shall be at least one urinal for male workers upto 50 and one for female workers upto fifty employed at a time, provided that where the number of male or female workmen, as the case may be exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females upto the first 500 and one for every 100 or part thereafter.

(vi) (a) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.

(b) Latrines and urinals other than those connected with a flush sewage system shall comply with the requirements of the Public Health Authorities.

(vii) Water shall be provided by means of tap or otherwise so as to be conveniently accessible in or near the latrines and urinals.

(viii) Disposal of excreta :- Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator. Alternately excreta may be disposed of by putting a layer of

night soil at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm. layer of waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn to manure).

(ix) The contractor shall at his own expense, carry out all instructions issued to him by the Engineer-in-Charge to effect proper disposal of night soil and other conservancy work in respect of the contractor's workmen or employees on the site. The contractor shall be responsible for payment of any charges which may be levied by Municipal or Cantonment Authority for execution of such on his behalf.

7. PROVISION OF SHELTER DURING REST

At every place there shall be provided, free of cost, four suitable sheds, two for meals and the other two for rest separately for the use of men and women labour. The height of each shelter shall not be less than 3 metres (10 ft.) from the floor level to the lowest part of the roof. These shall be kept clean and the space provided shall be on the basis of 0.6 sq.m. (6 sft) per head.

Provided that the Engineer-in-Charge may permit subject to his satisfaction, a portion of the building under construction or other alternative accommodation to be used for the purpose.

8. CRECHES

(i) At every work place, at which 20 or more women worker are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bedroom. The rooms shall be constructed with specifications as per clause 19H (ii) a,b & c.

(ii) The rooms shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean.

(iii) The contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the bed room.

(iv) The contractor shall provide one ayaa to look after the children in the creche when the number of women workers does not exceed 50 and two when the number of women workers exceed 50.

(v) The use of the rooms earmarked as creches shall be restricted to children, their attendants and mothers of the children.

9. CANTEENS

(i) In every work place where the work regarding the employment of contract labour is likely to continue for six months and where in contract labour numbering one hundred or more are ordinarily employed, an adequate canteen shall be provided by the contractor for the use of such contract labour.

(ii) The canteen shall be maintained by the contractor in an efficient manner.

(iii) The canteen shall consist of at least a dining hall, kitchen, storeroom, pantry and washing places separately for workers and utensils.

(iv) The canteen shall be sufficiently lighted at all times when any person has access to it.

(v) The floor shall be made of smooth and impervious materials and inside walls shall be lime-washed or colour washed at least once in each year.

Provided that the inside walls of the kitchen shall be lime-washed every four months.

(vi) The premises of the canteen shall be maintained in a clean and sanitary condition.

(vii) Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance.

(viii) Suitable arrangements shall be made for the collection and disposal of garbage.

(ix) The dining hall shall accommodate at a time 30 per cent of the contract labour working at a time.
(x) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs shall not be less than one square metre (10 sft) per diner to be accommodated as prescribed in sub-Rule 9.

(xi) (a) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number.

(b) Washing places for women shall be separate and screened to secure privacy.

(xii) Sufficient tables stools, chair or benches shall be available for the number of diners to be accommodated as prescribed in sub-Rule 9.

(xiii) (a) 1. There shall be provided and maintained sufficient utensils crockery, furniture and any other equipments necessary for the efficient running of the canteen.

2. The furniture utensils and other equipment shall be maintained in a clean and hygienic condition.

(b) 1. Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.

2. A service counter, if provided, shall have top of smooth and impervious material.

3. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipments.

(xiv) The food stuffs and other items to be served in the canteen shall be in conformity with the normal habits of the contract labour.

(xv) The charges for food stuffs, beverages and any other items served in the canteen shall be based on 'No profit, No loss' and shall be conspicuously displayed in the canteen.

(xvi) In arriving at the price of foodstuffs, and other article served in the canteen, the following items shall not be taken into consideration as expenditure namely:-

a) The rent of land and building.

b) The depreciation and maintenance charges for the building and equipments provided for the canteen.

c) The cost of purchase, repairs and replacement of equipments including furniture, crockery, cutlery and utensils.

d) The water charges and other charges incurred for lighting and ventilation.

e) The interest and amounts spent on the provision and maintenance of equipments provided for the canteen.

(xvii) The accounts pertaining to the canteen shall be audited once every 12 months by registered accountants and auditors.

10. ANTI-MALARIAL PRECAUTIONS

The contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Engineer-in-Charge including the filling up of any borrow pits which may have been dug by him.

11. The above rules shall be incorporated in the contracts and in notices inviting tenders and shall form an integral part of the contracts.

12. AMENDMENTS

Government may, from time to time, add to or amend these rules and issue directions - it may consider necessary for the purpose of removing any difficulty which may arise in the administration thereof.

Contractor's Labour Regulations

1. SHORT TITLE

These regulations may be called the C.P.W.D./PWD (DA) Contractors Labour Regulations.

2. DEFINITIONS

- i. Workman means any person employed by C.P.W.D./PWD (DA) or its contractor directly or indirectly through a subcontractor with or without the knowledge of the Central Public Works Department/PWD (DA) to do any skilled, semiskilled or unskilled manual, supervisory, technical or clerical work for hire or reward, whether the terms of employment are expressed or implied but does not include any person :-
- a) Who is employed mainly in a managerial or administrative capacity: or
 - b) Who, being employed in a supervisory capacity draws wages exceeding five hundred rupees per mensem or exercises either by the nature of the duties attached to the office or by reason of powers vested in him, functions mainly of managerial nature: or
 - c) Who is an out worker, that is to say, person to whom any article or materials are given out by or on behalf of the principal employers to be made up, cleaned, washed, altered, ornamental finished, repaired adopted or otherwise processed for sale for the purpose of the trade or business of the principal employers and the process is to be carried out either in the home of the out worker or in some other premises, not being premises under the control and management of the principal employer.

No person below the age of 14 years shall be employed to act as a workman.

- ii. Fair Wages means wages whether for time or piece work fixed and notified under the provisions of the Minimum Wages Act from time to time.
- iii. Contractors shall include every person who undertakes to produce a given result other than a mere supply of goods or articles of manufacture through contract labour or who supplies contract labour for any work and includes a subcontractor.
- iv. Wages shall have the same meaning as defined in the Payment of Wages Act.

3.

- i. Normally working hours of an adult employee should not exceed 9 hours a day. The working day shall be so arranged that inclusive of interval for rest, if any, it shall not spread over more than 12 hours on any day.
- ii. When an adult worker is made to work for more than 9 hours on any day or for more than 48 hours in any week, he shall be paid over time for the extra hours put in by him at double the ordinary rate of wages.
- iii. a) Every worker shall be given a weekly holiday normally on a Sunday, in accordance with the provisions of the Minimum Wages (Central) Rules 1960 as amended from time to time irrespective of whether such worker is governed by the Minimum Wages Act or not.

b) Where the minimum wages prescribed by the Government under the Minimum Wages Act are not inclusive of the wages for the weekly day of rest, the worker shall be entitled to rest day wages at the rate applicable to the next preceding day, provided he has worked under the same contractor for a continuous period of not less than 6 days.

c) Where a contractor is permitted by the Engineer-in-Charge to allow a worker to work on a normal weekly holiday, he shall grant a substituted holiday to him for the whole day on one of the five days

immediately before or after the normal weekly holiday and pay wages to such worker for the work performed on the normal weekly holiday at overtime rate.

7. DISPLAY OF NOTICE REGARDING WAGES ETC.

The contractor shall before he commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clear and legible condition in conspicuous places on the work, notices in English and in the local Indian languages spoken by the majority of the workers giving the minimum rates of wages fixed under Minimum Wages Act, the actual wages being paid, the hours of work for which such wage are earned, wages periods, dates of payments of wages and other relevant information as per Appendix 'III'.

5. PAYMENT OF WAGES

- i. The contractor shall fix wage periods in respect of which wages shall be payable.
- ii. No wage period shall exceed one month.
- iii. The wages of every person employed as contract labour in an establishment or by a contractor where less than one thousand such persons are employed shall be paid before the expiry of seventh day and in other cases before the expiry of tenth day after the last day of the wage period in respect of which the wages are payable.
- iv. Where the employment of any worker is terminated by or on behalf of the contractor the wages earned by him shall be paid before the expiry of the second working day from the date on which his employment is terminated.
- v. All payment of wages shall be made on a working day at the work premises and during the working time and on a date notified in advance and in case the work is completed before the expiry of the wage period, final payment shall be made within 48 hours of the last working day.
- vi. Wages due to every worker shall be paid to him direct by contractor through Bank or ECS or online transfer to his bank account.
- vii. All wages shall be paid through Bank or ECS or online transfer.
- viii. Wages shall be paid without any deductions of any kind except those specified by the Central Government by general or special order in this behalf or permissible under the Payment of Wages Act 1956.
- ix. A notice showing the wages period and the place and time of disbursement of wages shall be displayed at the place of work and a copy sent by the contractor to the Engineer-in-Charge under acknowledgment.
- x. It shall be the duty of the contractor to ensure the disbursement of wages through bank account of labour.
- xi. The contractor shall obtain from the Junior Engineer or any other authorised representative of the Engineer-in-Charge as the case may be, a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage-cum-Muster Roll" as the case may be in the following form:-
- xii. "Certified that the amount shown in column No has been paid to the workman concerned through bank account of labour on at....."
- xiii. (Modified OM No. DG/CON/283 dt. 05.05.2015)
- xiv. FINES AND DEDUCTIONS WHICH MAY BE MADE FROM WAGES
- xv. The wages of a worker shall be paid to him without any deduction of any kind except the following:-
- xvi. Fines
- xvii. Deductions for absence from duty i.e. from the place or the places where by the terms of his employment he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.
- xviii. Deduction for damage to or loss of goods expressly entrusted to the employed person for custody or for loss of money or any other deduction which he is required to account, where such damage or loss is directly attributable to his neglect or default.
- xix. Deduction for recovery of advances or for adjustment of overpayment of wages, advances granted shall be entered in a register.
- xx. Any other deduction which the Central Government may from time to time allow.

xxi. No fines should be imposed on any worker save in respect of such acts and omissions on his part as have been approved of by the Chief Labour Commissioner.

xxii. Note :- An approved list of Acts and Omissions for which fines can be imposed is enclosed at Appendix-X

xxiii. No fine shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.

xxiv. The total amount of fine which may be imposed in any one wage period on a worker shall not exceed an amount equal to three paise in a rupee of the total wages, payable to him in respect of that wage period.

xxv. No fine imposed on any worker shall be recovered from him by instalment, or after the expiry of sixty days from the date on which it was imposed.

xxvi. Every fine shall be deemed to have been imposed on the day of the act or omission in respect of which it was imposed.

xxvii.

xxviii. LABOUR RECORDS

xxix. The contractor shall maintain a Register of persons employed on work on contract in Form XIII of the CL (R&A) Central Rules 1971 (Appendix IV)

xxx. The contractor shall maintain a Muster Roll register in respect of all workmen employed by him on the work under Contract in Form XVI of the CL (R&A) Rules 1971 (Appendix V).

xxxi. The contractor shall maintain a Wage Register in respect of all workmen employed by him on the work under contract in Form XVII of the CL (R&A) Rules 1971 (Appendix VI).

xxxii. Register of accident - The contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars:

xxxiii. Full particulars of the labourers who met with accident.

a) Rate of Wages.

b) Sex

c) Age

d) Nature of accident and cause of accident.

e) Time and date of accident.

f) Date and time when admitted in Hospital,

g) Date of discharge from the Hospital.

h) Period of treatment and result of treatment.

i) Percentage of loss of earning capacity and disability as assessed by Medical Officer.

j) Claim required to be paid under Workmen's Compensation Act.

k) Date of payment of compensation.

l) Amount paid with details of the person to whom the same was paid.

m) Authority by whom the compensation was assessed.

n) Remarks

i. The contractor shall maintain a Register of Fines in the Form XII of the CL (R&A) Rules 1971 (Appendix-XI)

The contractor shall display in a good condition and in a conspicuous place of work the approved list of acts and omissions for which fines can be imposed (Appendix-X)

ii. The contractor shall maintain a Register of deductions for damage or loss in Form XX of the CL (R&A) Rules 1971 (Appendix-XII)

iii. The contractor shall maintain a Register of Advances in Form XXIII of the CL (R&A) Rules 1971 (Appendix-XIII)

iv. The contractor shall maintain a Register of Overtime in Form XXIII of the CL (R&A) Rules 1971 (Appendix-XIV)

6. ATTENDANCE CARD-CUM-WAGE SLIP

- i. The contractor shall issue an Attendance card-cum-wage slip to each workman employed by him in the specimen form at (Appendix-VII)
- ii. The card shall be valid for each wage period.
- iii. The contractor shall mark the attendance of each workman on the card twice each day, once at the commencement of the day and again after the rest interval, before he actually starts work.
- iv. The card shall remain in possession of the worker during the wage period under reference.
- v. The contractor shall complete the wage slip portion on the reverse of the card at least a day prior to the disbursement of wages in respect of the wage period under reference.
- vi. The contractor shall obtain the signature or thumb impression of the worker on the wage slip at the time of disbursement of wages and retain the card with himself.

7. EMPLOYMENT CARD

The contractor shall issue an Employment Card in Form XIV of the CL (R&A) Central Rules 1971 to each worker within three days of the employment of the worker (Appendix-VIII).

8. SERVICE CERTIFICATE

On termination of employment for any reason whatsoever the contractor shall issue to the workman whose services have been terminated, a Service certificate in Form XV of the CL (R&A) Central Rules 1971 (Appendix-IX)

9. PRESERVATION OF LABOUR RECORDS

All records required to be maintained under Regulations Nos. 6 & 7 shall be preserved in original for a period of three years from the date of last entries made in them and shall be made available for inspection by the Engineer-in-Charge or Labour Officer or any other officers authorised by the Ministry of Urban Development in this behalf.

10. POWER OF LABOUR OFFICER TO MAKE INVESTIGATIONS OR ENQUIRY

The Labour Officer or any person authorised by Central Government on their behalf shall have power to make enquires with a view to ascertaining and enforcing due and proper observance of Fair Wage Clauses and the Provisions of these Regulations. He shall investigate into any complaint regarding the default made by the contractor or subcontractor in regard to such provision.

11. REPORT OF LABOUR OFFICER

The Labour Officer or other persons authorised as aforesaid shall submit a report of result of his investigation or enquiry to the Executive Engineer concerned indicating the extent, if any, to which the default has been committed with a note that necessary deductions from the contractor's bill be made and the wages and other dues be paid to the labourers concerned. In case an appeal is made by the contractor under Clause 13 of these regulations, actual payment to labourers will be made by the Executive Engineer after the Superintending Engineer has given his decision on such appeal.

- i. The Executive Engineer shall arrange payments to the labour concerned within 45 days from the receipt of the report from the Labour Officer or the Superintending Engineer as the case may be.

12. APPEAL AGAINST THE DECISION OF LABOUR OFFICER

Any person aggrieved by the decision and recommendations of the Labour Officer or other person so authorised may appeal against such decision to the Superintending Engineer concerned within 30 days from the date of decision, forwarding simultaneously a copy of his appeal to the Executive Engineer concerned but subject to such appeal, the decision of the officer shall be final and binding upon the contractor.

13. PROHIBITION REGARDING REPRESENTATION THROUGH LAWYER

- i. A workman shall be entitled to be represented in any investigation or enquiry under these regulations by:-

- a) An officer of a registered trade union of which he is a member.
 - b) An officer of a federation of trade unions to which the trade union referred to in clause (a) is affiliated.
 - c) Where the employer is not a member of any registered trade union, by an officer of a registered trade union, connected with the industry in which the worker is employed or by any other workman employed in the industry in which the worker is employed.
- ii. An employer shall be entitled to be represented in any investigation or enquiry under these regulations by :-
- a) An officer of an association of employers of which he is a member.
 - b) An officer of a federation of associations of employers to which association referred to in clause (a) is affiliated.
 - c) Where the employers is not a member of any association of employers, by an officer of association of employer connected with the industry in which the employer is engaged or by any other employer, engaged in the industry in which the employer is engaged.
- iii. No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under these regulations.

14. INSPECTION OF BOOKS AND SLIPS

The contractor shall allow inspection of all the prescribed labour records to any of his workers or to his agent at a convenient time and place after due notice is received or to the Labour Officer or any other person, authorised by the Central Government on his behalf.

15. SUBMISSIONS OF RETURNS

The contractor shall submit periodical returns as may be specified from time to time.

16. AMENDMENTS

The Central Government may from time to time add to or amend the regulations and on any question as to the application/Interpretation or effect of those regulations the decision of the Superintending Engineer concerned shall be final.

REGISTER OF MATERNITY BENEFITS (Clause 19 F)

Name of the employee	Father's/Husband name	Nature of Employment	Period of actual employment	Date on which notice of confinement given name
1	2	3	4	5

Date on which maternity leave commenced and ended

Date of delivery/miscarriage	Commenced	Ended	Commenced	Ended
6	7	8	9	10

Leave pay paid to the employee

In case of miscarriage

In case of delivery

Remarks

Rate of leave pay	Amount paid	Rate of leave pay	Amount paid	
11	12	13	14	15

**SPECIMEN FORM OF THE REGISTER, REGARDING MATERNITY BENEFIT ADMISSIBLE
TO THE CONTRACTOR'S LABOUR
IN CENTRAL PUBLIC WORKS DEPARTMENT WORKS.**

Name and address of the contractor.....

Name and location of the work.....

- 1- Name of the woman and her husband's name.
- 2- Designation.
- 3- . Date of appointment.
4. Date with months and years in which she is employed.
5. Date of discharge/dismissal, if any.
6. Date of production of certificates in respect of pregnancy.
7. Date on which the woman informs about the expected delivery.
8. Date of delivery/miscarriage/death
9. Date of production of certificate in respect of delivery/miscarriage.
10. Date with the amount of maternity/death benefit paid in advance of expected delivery.
11. Date with amount of subsequent payment of maternity benefit.
12. Name of the person nominated by the woman to receive the payment of the maternity benefit after her death.
13. If the woman dies, the date of her death, the name of the person to whom maternity benefit amount was paid, the month thereof and the date of payment.
14. Signature of the contractor authenticating entries in the register.
15. Remarks column for the use of Inspecting Officer.

Labour Board

Name of work

Name of Contractor

.....

Address of Contractor

.....

Name and address of C.P. W.D. Division

.....

Name of C.P.W.D. Labour Officer

.....

Address of C.P.W.D. Labour Officer

.....

Name of Labour Enforcement Officer

.....

Address of Labour Enforcement Officer

.....

.....

.....

Sl No.	Category	Minimum wage fixed	Actual wage paid	Number present	

Weekly holiday

Wage period

Date of payment of wages

.....

Working hours

Rest

interval

.....

Register of Workmen Employed by Contractor

Name and address of contractor.....

Name and address of establishment under which contract is carried on.....

Nature and location of work.....

Name and address of Principal Employer.....

S l . n o	Name and surnam e of worker	Age and Sex	Father's/ Husb and's name	Nature of employment/ designation	Permanent home address of the workman (Village and Tehsil, Taluk and District)	Local address	Date of commence- ment of employment	Signatur e or thumb impressi on of the workm an	Date of termi natio n of empl oyme nt	Reaso ns for termin ations	R e m a r k s
1	2	3	4	5	6	7	8	9	1 0	1 1	1 2

**Form XVI (See Rule 78(2)(a))
Muster Roll**

Name and address of the contractor.....

Name and address of establishment under which contract is carried on

Nature and location of work

Name and address of Principal Employer For the Month of Fortnight

Sl no	Name of workman	Sex	Father's/Husband's name	Dates					Remarks
				1	2	3	4	5	
1	2	3	4	5					6
				1	2	3	4	5	

Form XVII (See Rule 78(2)(a))

Register of Wages

Name and address of the contractor.....

Name and address of establishment under which contract is carried on

Nature and location of work

Name and address of Principal Employer

Wages period Monthly/ Fortnight

Sl No.	Name of workman	Serial No. in the register of workman	Designation nature of work done	No. of days worked	Units of work done	Daily rate of wages/ piece rate	Amount of wages earned					Deduction if any (indicate nature)	Net amount paid	Signature or thumb impression of the workman	Initial of contractor or his representative
							Basic wages	Deductions	Over time	Other cash payments (indicate nature)	Total				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Wage Card

Name and address of contractor
Name and location of work
Name of workman Month/Fortnight

Date of Issue
Designation

Rate of Wages

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
28 29 30 31

Morning
Evening
Initial

Received from the sum of Rs.

Signature

[See rule 78 (2)(b)]

Wages Slip

Name and address of contractor.....

Name and Father's/Husband's name of workman.....

Nature and location of work.....

For the Week/Fortnight/Month ending.....

1- No. of days worked.....

2- No. of units worked in case of piece rate workers.....

3- Rate of daily wages/piece rate

4- Amount of overtime wages.....

5- Gross wages payable.....

6- Deduction, if any.....

7- Net amount of wages paid.....

Initials of the contractor or his representative

[See rule 76]
Employment Card

Name and address of contractor-----

Name and address of establishment under which contract is carried on-----

Name of work and location of work-----

Name and address of Principal Employer-----

1- Name of the workman-----

2- SI. No. in the register of workman employed-----

3- Nature of employment/designation-----

4- Wage rate (with particulars of unit in case of piece work) -----

-

5- Wage period-----

6- Tenure of employment-----

7- Remarks-----

Signature of contractor

Service Certificate

Name and address of contractor.....

Nature and location of work.....

Name and address of workman.....

Age or date of birth.....

Identification marks.....

Father's/Husband's name.....

Name and address of establishment in under which contract is carried on.....

Name and address of Principal Employer.....
.....

Sl. No	Total Period for which employed		Nature of Work Done	Rate of wages (with particulars of unit in case of piece work)	Remarks
	From	To			
1	2	3	4	5	6

LIST OF ACTS AND OMISSIONS FOR WHICH FINES CAN BE IMPOSED

In accordance with rule 7(v) of the CPWD Contractor's Labour Regulations to be displayed prominently at the site of work both in English and local Language.

1. Willful insubordination or disobedience, whether alone or in combination with other.
2. Theft fraud or dishonesty in connection with the contractors beside a business or property of CPWD.
3. Taking or giving bribes or any illegal gratifications
4. Habitual late attendance.
5. Drunkenness lighting, riotous or disorderly or indifferent behavior
6. Habitual negligence.
7. Smoking near or around the area where combustible or other materials are locked
8. Habitual indiscipline.
9. Causing damage to work in the progress or to property of the CPWD or of the contractor.
10. Sleeping on duty.
11. Malingering or slowing down work.
12. Giving of false information regarding name, age father's name, etc.
13. Habitual loss of wage cards supplied by the employers.
14. Unauthorized use of employer's property of manufacturing or making of unauthorized particles at the work place.
15. Bad workmanship in construction and maintenance by skilled workers which is not approved by the Department and for which the contractors are compelled to undertake rectifications.
16. Making false complaints and/or misleading statements.
17. Engaging on trade within the premises of the establishments.
18. Any unauthorized divulgence of business affairs of the employees.
19. Collection or canvassing for the collection of any money within the premises of an establishment unless authorized by the employer.
20. Holding meeting inside the premises without previous sanction of the employers.
21. Threatening or intimidating any workman or employer during the working hours within the premises.

13. PROFORMA OF SCHEDULES

SCHEDULE `A`

Schedule of quantities: Attached

SCHEDULE `B`

Schedule of materials to be issued to the contractor: NIL

SCHEDULE `C`

Tools and plants to be hired to the contractor: NIL

SCHEDULE `D`

Extra schedule for specific requirements/document for the work, if any: NIL

SCHEDULE `E`

Reference to General Conditions of contract: **CPWD General Conditions of Contract 2020.**

Name of work: Construction of Workshop Shed including all Civil, Electrical, water supply sanitary, installation and external development works on LUMPSUM basis in IIT, Patna campus at Bhita.

- | | | |
|---------------------------|---|---|
| i. Estimated cost of work | : | Total Rs. 2,14,94,109/- |
| ii. Earnest Money | : | Rs, 4,30,000/- |
| iii. Performance Security | : | 3% (Five percent) of tendered amount. |
| iv. Security deposit | : | 5% (two decimal five percent) of tendered value |

SCHEDULE-F

General Rules & Directions

Officer inviting tender : Registrar, IIT Patna

Definitions:

1	Engineer-in-Charge	The Executive Engineer Civil IIT Patna
2	Accepting Authority	Director, IITP
3	Percentage on cost of materials and labour to cover all over heads and profits.	15%
4	Standard Schedule of rates	Standard Schedule of Rates (i) Civil work: CPWD Delhi Schedule of Rates 2021 with amendments up to the date of submission of bid. (ii) Electrical work : CPWD Delhi Schedule of Rate 2018-(E&M) with amendments up to the date of submission of bid (iii) Horticulture work: CPWD Horticulture Schedule of Rate 2020 with amendments, up to the date of submission of bid.
5	Department	IIT Patna
6	Standard CPWD Contract Form	CPWD Form 8 & GCC 2020 modified & Corrected up-to the last date of submission of Bid and as per Appendix-I
Clause 1	(i) Time allowed for submission of Performance Guarantee, programme chart (Time and Progress) and applicable labour licenses, registration with GST, EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance.	15 Days
	(ii) Maximum allowable extension with late fees @0.1%per day of performance guarantee amount beyond the period as provided in (i) above.	15(Fifteen) days with late fee @ 0.1% per (nonrefundable)
Clause2	Authority for fixing compensation under clause2.	Director, IITP
Clause 2A	Whether clause 2A applicable	Yes
Clause 5 (i)	Number of days from date of issue of letter of acceptance for reckoning date of start.	15 days from letter of award
(ii)	Mile stone	As per chart below.

(iii)	Time allowed for execution of works	15 months (03 months for design & planning and twelve months for execution.
(iv)	Authority to give extension of time for completion of work	Director IIT Patna
(v)	Rescheduling of Mile stone	Director IIT Patna
vi	Shifting of date of start in, Case of delay in handing. Over of site	Director IIT Patna

Mile Stones of the Contract

Note: The withheld amount to non-achievement of mile stone may be released if the subsequent mile stone is achieved in the specified time.

Clause 6A	Clause 6/6A applicable	6A
Clause 7	Payment of intermediate certificate to be regarded as Advances	Applicable
Clause 7 A	No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge.	Applicable
Clause 10A	List of testing equipment to be provided by the contractor at site lab	As per Appendix – D at page 178 CPWD Specification 2019 Volume-I
Clause 10 B (i)	Secured advance on non- perishable material	Applicable
Clause 10 B (ii)	Mobilization Advance	Applicable
Clause 10 C	Payment on account of increase in price s/wages due to statutory order(s). Component of labour expressed as percentage of value of work.	Not Applicable 25%
Clause 10CA	Payment due to variation in prices of materials after receipt of tender	Not Applicable

Clause 11: Works to be executed in accordance with specifications, drawings, order etc.

CPWD specification 2019 Volume-I and Vol-II with correction slips up to previous day of last date of submission of bid

CPWD specification for Electrical works 2017 Part-I (Internal) and part-III (Lifts & Electricals) both with correction slips up to previous day of last date of submission of bid.

CPWD specification of Horticulture & Landscaping 2020 with correction slips up to previous day of last date of submission of bid.

Clause 12: Deviation limit beyond which clauses 12.2. & 12.3 shall apply: **Not Applicable**

Clause 16: Competent authority for deciding reduced rates: **Director, IITP**

Clause 17: Defects liability period shall be 12 months after declaring the original construction work completed by the competent authority i.e. Director, IIT Patna.

Clause 25: As per Appendix i

Clause 36 (i): Requirement of Technical representative and recovery rates

Minimum Qualification	Discipline	Designation	Minimum experience	Number	Rate at which recovery shall be made from the contractor (i)/per month
Graduate engineer	Civil	Project Manager	10 years	01	Rs.75,000
Graduate engineer/Diploma engineer	Civil	Deputy Project Manager	05 for Graduate and 10 for diploma	01	Rs. 50,000

“Assistant Engineer retired from Government Services those are holding Diploma will be treated at par with Graduate Engineer.”

Clause 42:

i	Schedule/statement for determining theoretical quantity of cement & bitumen	on the basis of Delhi Schedule of Rates 2021 printed by C.P.W.D
ii	Variations permissible on theoretical quantities:	
(a)	Cement	
	For works with estimated cost put to tender	2% Plus/Minus.

	not more than Rs. 25 lakh	
	Bitumen All Works	2.5% Plus only and nil on minus side.
(b)	Steel Reinforcement and structural steel sections	2% Plus/minus side sections for each diameter, section and category.
I	All other materials	NIL

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

S. No	Description of item	Rates in figure and words at which recovery shall be made from the contractor	
		Excess beyond permissible variation	Less use beyond the permissible variation
1	Reinforcement bars(TMT) (a)Primary Producer	NIL	Not Permitted
2	Structural steel	NIL	Not Permitted
3	Cement (PPC)	NIL	Not Permitted

14. ADDITIONAL CONDITIONS

1. The contractors are advised to get acquainted with the proposed work and its site and also study the Drawings, specifications and special conditions carefully before tendering. No claim of any sort shall be entertained on account of any site conditions and ignorance of specifications and special conditions.
2. The work shall be carried out as per CPWD specifications for works-2019 Vol. I & II with correction slips issued up to previous day of the last date of submission of bid unless otherwise specified in the nomenclature of individual item or in the specifications and special condition. Where specifications are silent, the decision of Engineer-in-Charge shall be final and binding on contractors.
3. The work shall be carried out in accordance with the approved architectural drawings and structural drawings.
4. The rates quoted by the contractor shall be taken as net and nothing extra shall be paid on any account i.e. royalty, cartage, sales tax and stacking required places etc.
5. The rates quoted shall apply for all heights and depths, leads and lifts unless otherwise specified in the agreement or specifications applicable to the agreement.
6. Any damage done by the contractor to any existing work during the course of execution of the work shall be made good by him at his own cost.
7. Articles manufactured by the reputed firms and approved by Engineer-in-Charge shall only be used.
8. Only articles classified, as 'first quality' by the manufacturer shall be used unless otherwise specified. In case articles bearing ISI certification are not available in the market, quality of samples brought by the contractor shall be judged by standards laid down in the relevant CPWD specifications. For the items not covered by CPWD specifications relevant BIS standards shall apply. The sample of materials to be brought to site for use in work shall be got approved from the Engineer-in-Charge before actual execution of work.
9. Various factory-made materials shall be procured from reputed and approved manufacturers or their authorized dealers. List of such approved manufacturers is available in this document. For the items / materials not appearing in the list the decision of Engineer in charge shall be final and binding. Any ISI marked material can be used in the work unless specifically provided for use of particular brand and make of item.
10. Wherever work is specified to be done or material procured through specialized agencies, their names shall be got approved well in advance from Engineer in charge. Failure to do so shall not justify delay in execution of work. It is suggested that immediately after award of work, contractor should negotiate with concerned specialist agencies and send their names for approval to Engineer-in-charge. Any material procured without prior approval of Engineer-in-charge in writing is liable to be rejected. Engineer in charge reserves right to get the materials tested in laboratories of his choice before final acceptance. Nonstandard materials shall not be accepted.

11. The contractor shall take instruction from the Engineer-in-charge for stacking of materials at any place. No excavated earth or building material shall be stacked on areas where other buildings, roads, services or compound walls are to be constructed.
12. Royalty at the prevalent rates shall be payable by the contractor on all the boulders, metals, shingle, sand and bajri etc. collected by him for the execution of the work, direct to the Revenue authority or authorized agent of the state Government concerned or Central Government.
13. The contractor shall establish a fully equipped site laboratory and shall provide testing machine appliance at site, such as weighing, scale, graduated cylinder, standard sieves, thermometer, slump cones etc. all relevant tests for BMC as per prescribed IS codes in order to enable the Engineer in charge to conduct field tests to ensure that the quality is consistent with the prescribed specifications and nothing extra shall be paid on this account.
14. The contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. In case, he or his authorized representative is not present or does not associate himself, the results or such tests and consequences thereon shall be binding on the contractor.
15. The contractor shall get the water tested with regard to its suitability of use in the works and get written approval from the Engineer in charge before he proceeds with the use of same of execution of works. If the tube well water is not suitable, the contractor shall arrange Municipal water or from any other sources at his own cost and nothing extra shall be paid to the contractor on this account. The water shall be got tested at frequency specified in latest CPWD specifications/BIS code.
16. The material shall conform to the quality and make as per attached list in this bid document. However, for the items not appearing in the list preference shall be given to those articles which bear ISI certification marks. In case articles bearing ISI certification marks are not available the quality of sample brought by the Contractor shall be judged by the standard laid down in the relevant ISI specification/CPWD specification. All materials and articles brought by the contractor to the site for use shall conform to the samples approved, which shall be preserved till the completion of the work. However, such articles which bear ISI mark but stand banned by CPWD will not be used. Notwithstanding the case of materials of "Approved Make" as given in this bid document, provisions of Clause 10A of the General Conditions of Contract for central PWD works shall be applicable on the materials of "Approved Make" also.
17. It must be ensured that all materials to be used in work bear BIS certification mark. In cases where BIS certification system is available for a particular material/product but not even a single producer has so far approached BIS for certification the material can be used subject to the condition that it should conform to CPWD specification and relevant BIS codes. In such case written approval of the Registrar may be obtained before use of such material in the work.
18. The final approval of the brand to be used shall be as per the direction of Engineer-in-Charge. The brand used shall be one of the brands in case specified in the list of approval materials as per list given in this bid document.
19. In case of non-availability of material of the brands specified in the list of approved materials an equivalent brand may be used after getting written approval of Registrar giving details to indicate that the brand proposed to be used is equivalent to the brands mentioned in the agreement.

20. Contractor shall have to execute a Guarantee Bond in respect of Water Proofing works as per Performa attached in this bid document. He shall also have to execute guarantee bonds for water supply and sanitary installations work on the proforma approved by Engineer-in-charge.
21. Samples of materials required for testing shall be provided free of cost by the contractor. Testing charges, if any, shall be borne by the department in case the test results are satisfactory except where-ever specifically mentioned otherwise in the NIT. All other expenditure to be incurred for taking samples, conveyance, packing etc. shall be borne by the contractor.
22. The construction joints shall be provided in predetermined locations only as decided by Engineer in-charge. The cost of shuttering for these construction joints shall be included in item of Concrete work / RCC work and nothing extra shall be payable on this account to the contractor.
23. No chase cutting/dismantling of plaster/RCC/CC shall be allowed, so contractor has to execute the electrical work accordingly.
24. The contractor shall invariably prepare the samples of finishing items i.e. flooring of different types, external & internal finishing i/c colour scheme of paint, tiles in dado, flooring in platforms & staircase, water supply & sanitary fittings and any other item as per direction of Engineer-in-charge. The contractor shall proceed with further finishing item only after getting the samples of these items approved in writing from Engineer-in-charge.
25. The contractor shall maintain the time bound progress for the execution of work and get it approved by the Engineer-in-charge. The contractor shall submit progress report by 7th of every month to Engineer-in-charge.
26. The contractor shall submit a detailed program of work within 5 days of the date of issue of letter of intent. Detailed program should include all the mile stone, cash flow, material procurement, manpower deployment. Program must show clearly the critical path to complete the project in time. The Engineer-in-Charge can modify the program and the contractor shall have to work accordingly. During review of work progress, Engineer in Charge can ask to modify the program. Contractor shall resubmit the modified program in 2 days.
27. The contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by department.
28. The contractor shall produce all the materials in advance so that there is sufficient time for testing and approving of the materials and clearance before use in work.
29. The quantities of each item shall not be exceeded beyond the agreement quantities without prior permission of Engineer-in-Charge.
30. Statutory deductions on account of GST, income tax and surcharge as applicable shall be made from the gross amount of the bill.
31. All types of mortars to be used in the work shall be mixed in the mechanical mixer and hand mixing shall not be permitted.
32. The contractor shall make his own arrangement for getting the permission to ply the trucks from the traffic police.
33. The contractor shall have to make approaches to the site, if so required and keep them in good condition for transportation of labour and materials as well as inspection of works by the Engineer in charge. Nothing extra shall be paid on this account.
34. No payment shall be made to the contractor for any damage caused by rain, snow fall, floods or any other natural causes whatsoever during the execution of work. The damage caused to work

shall have to be made good by the contractor at his own cost and no claim in this account shall be entertained.

35. Some restrictions may be imposed by the security staff etc. on the working and or movement of labour and materials etc, the contractor shall be found to follow all such restrictions/instructions and nothing shall be payable on this account.

36. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards. He shall be responsible for all damages and accidents caused due to negligence on his part. No hindrance shall be caused to traffic during the execution of the work by storing materials on the road.

37. The contractor shall be fully responsible for the safe custody of the material issued or brought by him to site for doing the work.

38. Unless otherwise specified all materials (e.g. stone and other valuable material) obtained in the work of dismantling, excavation etc. shall be considered Government's property and shall be neatly stacked at site & in the manner as decide by the Engineer-in-charge.

39. The building work will be carried out in the manner complying in all respects with the requirements of relevant bye laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer in charge and nothing extra will be paid on this account.

40. The work of water supply, internal sanitary installation and drainage work etc. shall be carried out as per local Municipal Corporation or such local body Bye-laws and the contractor shall produce necessary completion certificate from such authorities after completion of the work.

41. The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rule and regulations and pay all fees and charges which he may be liable.

42. The contractor shall give a performance test of the entire installation (s) as per standing specification before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test.

43. Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been in-built in the items and nothing extra shall be payable (or) extra cement considered in consumption on this account.

44. **AS-BUILT DRAWINGS**

The submission of the as-built drawings for the building and other establishment is the precondition for the final payment. The final drawings shall be submitted in one reproducible set and 5 copies on linen bound in an album of an approved size. The contractor shall submit all the completion drawings and approved design calculations on CD ROM / DVD in two copies with proper directory structure.

The contractor shall prepare, and keep up to date, a complete set of "as built" records of the execution of the works, showing the exact as built locations, sizes and details of the works as executed. The records shall be kept on the site and shall be used exclusively for the purpose of this sub clause. Two copies shall be supplied to the institute before the commencement of the tests on completion. The contractor shall supply to the Institute as built drawings of the works, showing all works as executed, and submit them to the Registrar for review. Prior to the issue of Completion of works certificate, the contractor shall provide to the IIT the specified numbers and types of copies of the relevant as built drawings, in accordance with the IIT's requirements. The Completion of works shall not be considered until the IIT has received the As Built Drawings

15. Annexures

Annexure-1

FINANCIAL TURNOVER/ PROFIT & LOSS

1. Name of Bidder
2. Total Financial Turn Over achieved by the bidder in the last five financial years.

Year	Gross Turnover (In Rs.)	Profit/Loss (Rs)
2018-19		
2019-20		
2020-21		

I/We hereby certify that the above information is correct to the best of my/our knowledge and belief.

Date:

Signature of Bidder
(With Seal wherever applicable)

Signature of the chartered Accountant

Form of Banker's Solvency Certificate

This is to certify that to the best of our knowledge and information that M/s Shri. _____ having marginally noted address, a customer of our bank are/is respectable and can be treated as good for any engagement up to a limit of Rs. _____ (Rupees _____)

The certificate is issued without any guarantee or responsibility on the bank or any of its officials.

Note: The solvency certificate should not be other than 01.01.2019

Signature/Seal of the Bank

Annexure-IV

(To be given on Non-Judicial stamp paper of **Rs10/-** only attested by Oath-Commissioner/Notary Public)

AFFIDAVIT

I/we Proprietor/ Partner/ Authorized Signatory of M/s. undertake that the information furnished by me in schedule/annexure 1 to 11 and abstract of details of the Technical bid of the tender for the work of “Construction of Higher Secondary School including all Civil, Electrical, water supply sanitary installation and external development works on LUMPSUM basis at IIT, Patna.” is correct and genuine to the best of my/our knowledge.

Proprietor/ Partner/ Authorized Signatory

M/s.

16. Schedule of payment – Stage wise as percentage of tendered amount.

Stages of the works on the completion of which the percentage of amount as under will be released:

(A) For Civil components

Sl. No.	DESCRIPTION OF ITEM	INDIVIUAL PERCENTAGE	CUMMULATIVE PERCENTAGE
1.1	Mobilization of work, excavation and laying of PCC under foundation including anti termite treatment.	1	1
1.2	Structural work up to plinth level including all RCC, masonry and anti-termite treatment with refilling of earth as required.	10	11
1.3	Structural work up to base of truss including all RCC, masonry works as required including truss fabrication	18	29
1.4	Structural work for roof including roof sheeting/gutter	8	37
1.5	Internal Plaster work at ground floor level including partition walls, steps, fixing of door frames etc.	5	42
1.6	Complete external plaster including elevation treatments, on chajjas, shades, copings etc.	5	47
1.7	Complete internal flooring at all levels, toilets, kitchens/pantry, sports venues, and court yards, apron etc.	6	53
1.8	Complete water supply, draining and rain water pipe line fittings internal and external, connection to & from tanks, drainage lines up to manholes etc.	5	58
1.9	Complete tiles, stone work & granite counters, toilet partitions, stair case steps, ramps and any other internal or external flooring.	5	63
1.10	Complete tiles, stone work in Dado staircases, toilets. complete.	5	68
1.11	Complete fittings of all doors, windows, shutters, grills, railings etc. and pre final coloring, paint& polish complete.	4	72
1.12	Complete external development including road, landscape, pathway etc.	3.5	75.5
1.13	Complete installations of all sanitary, water supply and any other fittings & fixtures as required.	3	78.5
1.14	Completion of external water supply and sanitary pipe lines including water tank	2	80.5
1.15	Trial run of all fittings and fixtures and all associated works.	0.5	81
1.16	Defect rectification and completion of all works.	0.5	81.5
Civil (Total)			81.5%

[B] For Electrical Works:

Sl. No.	Description	Individual %	Complete %
1.	Supply & Laying of MS Conduit for circuit, submain & piint& Fixing of boxes	1.5	1.5
2	Supply & Fixing of SDB	1.0	2.5
3	Supply & Fixing of Essential & Non-essential Main Panel, Cable tray, Race way.	1.5	4.0
4	Supply & Laying of Essential and Non-essential XLPE Cable from Substation-4 to Electrical Panel in Workshop	2.00	6.0
5	Wiring of Sub-main, Circuit & Points.	2.00	8.0
6	Supply & Fixing of Switch, Socket, Industrial Socket with cable, MCB, RCCB .	2.00	10.0
8	Supply & Fixing of Fan, Exhaust Fan, LED Light Fittings, LED Bay light fitting. SITC of inverter type split units in the office area.	4.00	14.0
9	Supply & fixing External Light fitting Poles & post top pole fitting etc.	1.00	15.0
10	Earthing of Panels, MDB, SDB and laying earth strip.	0.50	15.5
11	Testing & Commissioning of above items.	1.0	16.5
12	SITC of Addressable Fire panel, detector, Fire Extinguishers, First Aid Hose Reel and Public address system	1.00	17.5
13	SITC of Lightning Arrester & Lightning Conductor & Earthing.	0.50	18.0
14	SITC of LAN Conduit & Wiring, LAN Items Telephone Conduit, Wiring & point.	.50	18.5
	(Electrical) Total=		18.50%

17. Schedule of Quantities (Price Schedule)

SCHEDULE OF QUANTITY: LUMPSUM Contract (To be submitted online only)

INDIAN INSTITUTE OF TECHNOLOGY PATNA						
NIT No. IITP/IWD/WS/ /2022						
Name of Work: - Construction of Workshop Shed including all civil, electrical, mechanical, water supply, sanitary installation and external development works on LUMPSUM basis in IIT Patna campus at Bihta.						
PART- A: Construction, Planning and construction						
Sl No.	Description	Quantity	Unit	Rate per unit in figures (in Rs)	Rate per unit in words (in Rs)	Amount (in Rs)
1.	Construction of Workshop with steel truss roof complete in all respect including all civil works, all services like electrical, sanitary, plumbing, sewer, water supply, landscaping, approach road, site development etc. as per drawings, specifications and scope of work as mentioned in NIT	766.46	Sqm			