



Government of Andhra Pradesh

**A.P. Revised Standard Data
(with Schedule of Rates 2024-25)
(Effective from 01-06-2024)**

Part – 1

**For Water Resources Department Works
and
LEADS & LIFTS (Common to all Departments)**

BOARD OF CHIEF ENGINEERS

**Office of the Engineer-in-Chief (I.W),
Water Resources Department, 2nd Floor,
Jalasoudha Building, Irrigation Compound,
Governorpet, Vijayawada.**

Procs.No. ENC(IW)/SE(P&M)/EE.1/DEE-3/AEE / SoR 2024-25/Vol.1 dt: 28.06.2024.

Sub:- A.P. Revised Standard Data with SoR 2024-25 for Water Resources Department
Works (Part-I) – Approved – Printing & Communication of Standard Data – Reg.,

Ref:- 1) G.O.Ms.No.49, I&CAD (PW: Reforms) Dept., dt: 02.03.2009.
2) Minutes of BOCEs meeting for Schedule of Rates held on dt: 26.06.2024
3) SoR Procs.No. ENC(IW)/SE (P&M)/EE.1/DEE-3/AEE/SoR 2024-25/Vol.1
dt:28.06.2024.

The BoCEs meetings for finalization of Schedule of Rates (SoR) for WR Dept. (Part-I), Road & Bridges (Part-II) and Public Health Items (Part-IV) were held on 26.06.2024 and approved minutes of meeting is placed on the Water Resources website i.e., <http://irrigation.ap.gov.in>.

Subsequently, based on the approved minutes of meeting, the rates pertaining to WR items(Part-I), Roads & Bridges items(Part-II), Buildings(Part-III) & Public Health Items(Part-IV) are updated and proceedings are issued for approved SoR-2024-25 for Parts-I,II,III & IV on 28.06.2023 by Engineer-in-Chief(A.W/I.W), WR Dept. & Chairman, BoCEs.

Based on the approved rates of SoR-2024-25 for all the materials and capital cost of machinery, the unit rate of work items related to Water Resources Department are arrived for the year 2024-25.

By incorporating approved labour, material and Hire Charges for SoR 2024-25 & Percentage Provision of 13.615% towards Contractor's profit and overhead charges in the items, the A.P. Revised Standard Data (unit rate for work items) for the year 2024-25 is finalized.

Any additions or modifications or deletions in the existing data must be approved by BOCEs only.

Encl: Soft copy of A.P Revised Standard Data for WR Department for the year 2024-25.

**Sd/- R.Sathish Kumar, dt:28.06.2024
Engineer-in-Chief (AW/IW) &
Chairman, BoCEs,
Water Resources Department**

P.T.O.

- I) Copy submitted to the Special Chief Secretary to Govt., WR Dept., 4th Block, A.P.Secretariat Buildings, Velagapudi, Amaravathi.
- II) Copy communicated to the following Heads of Departments along with enclosures for information.
1. Engineer-in-Chief (Admin)., Roads & Buildings Department.
 2. Engineer-in-Chief, Public Health Department.
 3. Engineer-in-Chief, Panchayath Raj Department.
 4. Engineer-in-Chief, R.W.S. Department.
 5. Chief Engineer (Buildings &RSW), R&B Department.
- III) Copy of Scheduled of Rates 2024-25 & Standard data, Part-I (WR Dept. works) are communicated to the respective e-mail ids of all the Engineers-in-Chief, Chief Engineers and regional Superintending Engineers of Irrigation circles of Vijayawada, Guntur, Dowlaiswaram & Chittoor of Water Resources Department for taking necessary action.
- IV) Copy to DEE (Computers), EnC (AW) for uploading the approved SoR-2024-25 (Part-I, Part-II, Part III & Part-IV) & Standard Data Part-I on the Water Resources Department website to communicate this letter to all the members of Board of Chief Engineers through E-mail.

Sd/- R.Sathish Kumar, dt:28.06.2024
Engineer-in-Chief (AW/IW) &
Chairman, BoCEs,
Water Resources Department

GOVERNMENT OF ANDHRA PRADESH

ABSTRACT

Irrigation & CAD Department - Adoption of Revision and Updating of Andhra Pradesh Standard data in all Engineering/Public Works Department and other organisations - Orders - Issued.

IRRIGATION & CAD (PW- REFORMS) DEPARTMENT

G.O.Ms. No. 49

Dated: the 2nd March, 2009
Read the following:-

1. G.O.Rt.No.7326 , GA (GPM/AR) Department dated 26.10.2005
2. From the Director General D.O.Letter.No.CGG/AP Standard Data/2006-07, dated 8.12.2006
3. Govt.Memo.No.36710/Reforms/I&CAD(PW) Dept., dated 22.6.2007
4. U.O.Note.No.36710/Reforms/2005, I&CAD (PW) Dpt., dt.29.6.2007
5. Govt.Memo.No.36710/Reforms/2005, I&CAD Dept., dated 10.3.2008
6. From ENC (AW)/IW I&CAD Dept., Letter.No.ENC/IW/P&M/EE.1/DEE.8 /19200-98, dated 21.4.2008

ORDER:

The basic components for preparing any estimate are Standard Specifications, Standard Data, and Schedule of Rates for construction materials, skilled and un-skilled labour and hire charges of machinery utilized on works. To get the work done, as per the standard specifications, required quantities of recommended materials, requirement of specific need based manpower, deployment of proper utility based machinery and duration of its utilization are to be observed and quantified for each unit of work, and this is called Standard Data. Thus, the Standard Data gives the details of various inputs in terms of quantities required for one Unit of any work. Schedule of rates for material, skilled and unskilled labour are fixed and revised by the Board of Chief Engineers' once in a year and these are called Standard Schedule of Rates. When the Standard Schedule of Rates and Hire charges of machinery are incorporated in the inputs of Standard Data and Standard Schedule of Rates it will have direct bearing on the preparation of project Estimates and consequent finalization of Tenders.

(P.T.O.)

2. The existing AP Standard Data for various construction items were based on observations made several decades back mostly by utilizing manpower for execution of all items of works, and deployment of machinery was at the barest minimum. The advent of latest machinery and their extensive use has changed the structure and methodology of data formulation and rate structure. There is a need to revise the present “Standard Data” for all items of works dealing with Public works. Realizing the urgency and importance to have realistic data, Government in the GO.Rt.No.7326 G.A (GPM & AR) Department dated 26-10-2005 constituted a High Level Committee under the chairmanship of Special Chief Secretary, General Administration (GPM&AR) Department, to advise on “Updating and Revising the A.P.Standard Data”. A project for Standard Data (revision) and Schedule of Rates was conceived and entrusted to the Centre for Good Governance. Keeping in view the strategy, factors considered and classification of works, a number of High Level Committee meetings and review meetings were conducted at Centre for Good Governance/ A.P.Secretariat and in the offices of concerned Engineers-in-Chief I&CAD, Public Health, Panchayati Raj and Roads & Buildings Departments etc. Their specific views, suggestions and recommendations were taken into account, besides collecting the data from various sources while finalizing the Draft AP standard Data and Standard Schedule of Rates. This has been cleared by the Board of Chief Engineers’ and finally by the High level Committee. The Standard Data has been revised and updated in four parts considering nature of work, location of work and magnitude of work as indicated below.

1. PART - I	: Irrigation & Command Area Development.
2. PART- II	: Roads & Bridges.
3. PART-III	: Buildings
4. PART-IV	: Drinking Water Supply Schemes.

3. The revision of Standard Data and Schedule of Rates in respect of works items of Irrigation Department has been taken up by the SPIU (Irrigation) and completed as per the C.W.C guidelines and B.I.S standards and also observations and recommendations made by the High Level Committee. In respect of other Departments, MORTH data is adopted for Roads & Bridges, where higher capacity machinery can be deployed and MORD data is adopted for Roads & Bridges in Rural areas. For other works data as per MORTH, MORD, and C.P.W.D. etc., is adopted. The comparative estimates have been prepared by the T.R. &B Dept. , Engineering-in-Chief (Irrigation) and MA & UD Department for various types of works of a magnitude of Rs.15-20 crores, based upon the earlier data and the newly revised and proposed data .

4. After detailed deliberations and discussion on the above issue, the Govt. accept the recommendations of Board of Chief Engineers and High level Committee and accordingly issue the orders for adoption of the Revised and Updated Standard data in all Engineering/ Public works Department and other organisations in four parts considering nature of work, location of work and magnitude of work as indicated below. The four parts of Standard Data

booklets are forwarded to Engineer-in-Chief (AW), who in turn will publish the authenticated version and circulate a copy to all works Departments.

1. PART - I : Irrigation & Command Area Development.
2. PART- II : Roads & Bridges.
3. PART-III : Buildings
4. PART-IV : Drinking Water Supply Schemes.

5. The Revised Data now approved is to be adopted by all Engineering Departments/ all Public Works Department and other organisations, duly superseding all the earlier orders issued on the subject.

6. These orders shall come into force from the date of issue.

7. This order issues with the concurrence of Finance Department vide their U.O.No.5532/520/Exp.PW.I Dept/08, dated 13-5-2008.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

RAJIV RANJAN MISHRA
SECRETARY TO GOVERNMENT

To

All the Engineer-in-Chief of Irrigation & CAD Department.

All the Chief Engineers of Irrigation & CAD Department.

The Commissioner, Commissioner of Tenders,

The Engineer-in-Chief, PR & RD Department, Hyderabad.

The Engineer-in-Chief (R&B) Admn.,Dept., Hyderabad.

The Engineer-in-Chief (PH) Hyderabad.

Copy to:

All the Collectors & Dist. Magistrate of Andhra Pradesh

All Sections in Irrign. & CAD (PW/Irrgn.) Dept.

The Accountant General Andhra Pradesh Hyderabad.

The G.A. (Cabinet) Dept. w.r.t. U.O.No.79/2009, dated 17-2-2009.

The G.A. (GPM&AR) Dept.

The Finance (W&P) Dept.

The P.S. to Ministers (PR & RD/ MA &UD/ T.R. & B / Housing)

The P.S. to Prl. Secy. (SKJ)/ P.S. to Secretary (AD)/ P.S. to Secretary (RRM)

The P.S. to Prl. Secretary, Housing/P.S. to Prl. Secy, M.A. & U.D. / P.S. to Secretary, T.R.& B / P.S. to Prl. Secretary, PR & RD./P.S. to Secretary , Housing.

All the Advisors of Irrgn. & CAD Dept.

SF/SC.

// FORWARDED::BY ORDER//

SECTION OFFICER

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A.P. REVISED STANDARD DATA

PREAMBLE

The AP Revised Standard data for various construction items has come into existence as per the Government orders G.O.Ms.No.49, I & CAD (PW: Reforms) Dept., dt: 2-3-2009.

The background for adoption of A.P. Revised Standard Data is:

1. Government, in GO 7326 (GAD-GPM& AR), Dated 26-10-2005, has observed that the age old "Standard data" requires revision and updation with reference to the latest machinery and contemporary practices and has constituted a **High Level Committee** to advise on updating and revision of standard data and schedule of rates. The work has been taken up by CGG and SPIU-irrigation. The secretary (Irrigation) is the member-convener of the committee.

Accordingly the data has been revised adopting the procedures and guidelines given by CWC, Report on "committee on cost control of river valley Projects, BIS specifications, NHAI, MORTH, MORD, CPWD and Government of Karnataka and revised data and formulated schedule of rates for all infrastructure Departments (I&CAD, R&B, PR and PH). The team of senior engineers interacted with the S.R Committee of Karnataka on implementation and improvements needed. For Water Resources work items, the data pattern as adopted by Karnataka has been considered and for other Departments, the data adopted by MORTH, MORD and NHAI etc. is adopted.

2. Sequence followed in revision of standard data is,
 - (a) The first step is the revision and formulation of standard data for each work component.
 - (b) The second step is to work out the details of inputs. This enables to generate the unit work item rates, by incorporating the use rates of machinery, materials, labour charges and other supplementary parameters.
 - (c) The third step is to develop software tool to generate unit rate using the software (completed for Water Resources work items by the SPI Unit of Irrigation)

3. The Detailed draft data was communicated to all the HOD's and interacted through many seminars and discussions and incorporated the relevant features. The Board of chief engineers in their meetings have recommended for acceptance to the data formulated and schedule of rates. It was proposed to examine the recommendations on important parameters, to refer to high level committee, for their specific recommendations for adoption, as they are common to all departments.

The committee made in depth study on the methodology and systems followed by the reputed National organizations and other States and made detailed deliberations with HOD's and representatives of Builders Association of India and made recommendations to the Government, on adoption of such parameters in A.P.

4. The Chief Secretary held a detailed discussions on 04-07-2007, with the Secretaries of the Departments and Heads of Departments.

GUIDELINES

- 1) The Revised Standard Data is formulated under four Parts, which are applicable to all the Engineering Departments and other Organisations.

PART -1: Water Resources Department work items (Dam and Allied Works, Canals and Allied Works, Canal C.D. Works, Tunnels and Allied Works, Preliminary and Maintenance Works, Hydraulic Gates and allied works and Leads and Lifts applicable to all Departments)

PART -2: Roads and Bridges.

PART -3: Buildings including Electrical Works.

PART -4: Drinking Water Supply and Public Health (ONLY FOR WORKS DONE BY MANUAL MEANS)

2) Brief description of item of work (Specification of work item):

Brief description of the item of work to cover all important aspects of the work included in the Data. On reading the item description, the user should be in a position to assess the various cost components involved in the work.

3) Data for assessing quantities:

The data reflects various assessments / assumptions made in arriving at the quantities of materials, machinery, labour and other in-puts. In case of plants and equipment the output of main plant is worked out and the requirement of all other inputs and assessed to match the output of the main plant. Cycle time of operations is the criteria for assessing the output of equipment. Generally the equipment manufacturers furnish the output of machinery under ideal conditions of working. Suitable job and management efficiency factors are considered while working out the average output of machinery under field conditions. In case of combination of machinery and manpower, the assessment of manpower shall match the output of machinery.

Though cycle time of operations is the criteria for hourly / daily out-put of machinery work-force, the actual progress of work depends on several other factors such as power interruptions, minor break-downs, time for meals and other needs of work-force, stray rains etc. Therefore, it is the general practice to consider 50 minutes as the actual working time per hour for working out the hourly / daily out-put of machinery / work-force. CWC /

BIS guide-lines stipulate the actual working hours for the purpose of equipment planning and utilisation. The daily out-put is computed duly considering the actual available working time and feedback from the field.

- For gate and hoist works, it is the general practice to specify the quantity of work in terms of number of sets of embedded parts / gates. The requirement of machinery and work-force for cutting, bending, fabrication, erection, painting etc., is assessed to commensurate with the task involved.
- The data for gates and E.M. Parts is arrived per Ton quantity.
- The data for Hoists and Gantry Cranes is worked out on the basis of capacity in tonnage.

3) The lead and lift charges provided in PART-I (B) are generally applicable and common to all Departments. For applicability of lead and lift charges for various materials and other details, please refer to COM-LDLFT in lead and lift charges statement. For any item not covered in this part, the rates as provided in the data of the relevant works may be adopted in preparation of estimates.

4) The basic material inputs needed for all works are listed and incorporated in the data. The requirements are analyzed and the specifications adopted shall confirm to Standards published by the BIS.

- The labour and material rates will be communicated by the Board of Chief engineers.
- Unless otherwise specified, all material rates shall be exclusive of GST, duties, levies, transportation and handling costs up to project area.
- For sand, gravel , murum, stones , course aggregates etc, the rates are to be fixed for delivery at Quarry, adding loading charges by machinery / manual means and idle hire charges of machinery (as per table under chapter“ conveyance or lead and lift charges”), as applicable.
- For steel, AC sheets, GI sheets, Hume pipes, wood and stone slabs, the rates are to be taken prevailing at major commercial centre near project area. The lead charges, as applicable are to be added in preparing estimates.

- The specifications of the aggregates for sizes and gradation and its adoption shall be as per IS 383.

6) The labour component in the data is mentioned for unit work.

- No allowance towards labour importation and labour amenities added extra as they are included in the recommended overheads.
- On Labour Component: Certain additional allowances are added extra to the wages of labour (i.e. only on labour component in the work item) in the form of percentage, as recommended by the Government/Board of Chief Engineers due to statutory and other provisions.
- However, If more than one area allowances, such as those for (1) Municipalities Agency / Tribal areas (3) Industrial areas are applicable for a particular situation, only the maximum out of the allowable percentages is to be allowed.

7) HIRE CHARGES OF MACHINERY:

The machinery and /or group of machinery for items of works and their output has been worked based on the availability of machinery generally in the market and working in the field successfully, duly considering cycle time, idle time, operator efficiency, type of work etc.

- The hire charge of a machinery / equipment is worked out based on the guidelines published by CWC and BIS codes.
- For the other machinery not covered by the list, the R&B and other users may adopt hire charges as recommended by the MORTH.

8) Lead Charges

- The high level committee has recommended to adopt, for conveyance by head load, a minimum lead of 50 meters and additional lead up to 150 meters in the intervals of 50 meters. Beyond 150 meters lead, only machinery rates are to be adopted.
- The basic work item rates provided in the Standard Data include 50 m or 1 km as initial lead and no lead charges shall be allowed where the source of material is within the initial lead specified in item rate. Additional lead charges shall be allowed

for the lead exceeding initial lead specified in the item rate. The Guidelines may be followed regarding adding Lead charges as given against each chapter.

- The lead charges per unit quantity for conveyance of the materials are worked out, and included in the schedule of rates in increment of 50 m for head load and in increment of 1 km for mechanical mode.
- The rates for lead charges by head load up to 150 meters and by machinery up to 5 km, shall be cumulative and inclusive of lead charges for preceding lead. For lead beyond 5 km, the lead charges shall be worked out on per km basis.

9) Loading and Unloading charges for Materials

The following features are considered:

1. Loading and unloading charges are not payable for conveyance by head load.
2. Loading and unloading charges are not payable for conveyance by mechanical means, for disposal of excavated material unless specified.
3. The rates for unloading of materials except earth, sand, gravel, coarse aggregate, rubble, size stone and cut stone, are inclusive of stacking wherever applicable.

10) LIFT CHARGES:

- The data includes initial lift charges of 3 meters ,for materials conveyance by head load, Additional leads in the interval of 1.0 meters are worked out, as additional labour input and incorporated in the chapter on" Lead and lifts" .
- Where the conveyance / lifting of material is done by mechanical means, lift charges shall not be considered, as the cycle time of operation of the machine includes lifts involved.
- The data and rates for lift charges is cumulative and are inclusive of rates for preceding lifts also.

11) Wastage of Materials

- (i) **Cement:** No wastage allowance is recommended towards the quantity of cement used in works, as the wastage is already included in the input and in major works , bulk quantities are used.

(ii) Steel: The wastage of steel @ 2.5% is allowed for gates and allied structures. For RCC works the wastage is @2.5% for the reinforcement rods above 36mm dia. and @ 5% for rods below 36mm dia. including overlaps, if they are not welded. If welding is adopted for the reinforcement rods even for below 36mm dia, 2.5% of wastage is only recommended.

12) Provision for rate for water:-

The Committee has recommended not to consider the water charges in the Irrigation Project works. But, it may be considered in specific cases as per the site conditions.

13) In respect of RCC works the rate for cement concrete for 1 cum is worked separately for all grades based on Indian Standards. The rate for ton is calculated separately and to be added separately in the estimates of RCC works as a separate item.

14) Soil classification: The Committee recommended to allow uniform classification of soils for all Departments and data is worked out accordingly.

1. All soils
2. Marshy soil
3. Ordinary rock (not requiring blasting),
4. Hard rock
 - a. Hard rock (requiring blasting)
 - b. Hard rock (controlled blasting)
 - c. Removable by chiselling (blasting prohibited)

15) Use of Super Plasticizers and Admixtures:

Concrete admixtures such as Air-Entraining Agent (AEA) / Water reducing agent can be used advantageously for better quality concrete. The high level committee has recommended to adopt for super plasticizers and admixtures at 0.4% on cement for concrete work as per MORTH standards for batching plants.

16) Contractors overheads, profit and other provisions:

- High Level Committee has recommended adding 14% towards contractor overheads and profit including labour importation and amenities, insurance etc., as given below which includes various items as recommended in MORTH data.
- The provision for GST for works contracts at 12% or as fixed by the Government from time to time should be made separately in Part-B of the estimate. The provisions allowed in G.O.Ms.No.94, I&CAD, dt: 01.07.03, need not be added separately for the items covered in the contractor overhead charges.

The overhead charges include the following elements:

- Site accommodation, setting up plant, access road, water supply, electricity and general site arrangements.
- Office furniture, equipment and communications
- Expenditure on:
 - Corporate office of contractor
 - site supervision
 - Documentation and "as built" drawings
 - Mobilisation/ de-mobilisation of resources
 - Labour camps with minimum amenities and transportation to work sites.
 - Light vehicles for site supervision including administrative and managerial requirements.
 - Laboratory equipment and quality control including field and laboratory testing.
 - Minor T & P and survey instruments and setting outworks, including verification of line, dimensions, trial pits and bore holes, where required.
 - Watch and ward.
 - Traffic management during construction.
 - Expenditure on safeguarding environment.
 - Sundries.
 - Financing Expenditure

- ~~Work insurance/ compensation~~ (Deleted as per the Government Orders G.O.Ms.No.62 I&CAD (Reforms) Department dt:11.11.2014 and consequently CP & OH component reduced to 13.615% from 14%).

17) Excise duty on Supplies : (Deleted)

18) Dewatering & Desilting:

The High level committee considering the local conditions of rainfall / seepage has recommended towards de-watering and de-silting at 3 percent on the relevant work component for which dewatering is required. It is also proposed as per CWC guidelines, to keep a condition in the agreements shall be incorporated, to fix a ceiling of 5% in extreme cases, with the specific approval of Chief Engineer/Government.

19) Computerization of Data:

- A software program is developed by the SPI Unit (Irrigation), which facilitates automatic changes and generation of unit rates, based on basic input rates of Labour, materials and capital cost of machinery.
- A soft ware tool is also developed for auto preparation of estimates based on input quantities.
- Other Departments are also advised to develop such program.

20) In each chapter additional details are incorporated for clarity.

USER GUIDELINES OF REVISED STANDARD DATA

- 1.** Please select the item of work, as given in Index Code, and view the relevant data.
- 2.** The common data items like, lead, lift, conveyance and manual excavation (without involving contracting agencies) is applicable to all Departments (Volume-1)
- 3.** The departments have to adopt the relevant data from other Departments, if such works are executed by them.
- 4.** The unit rate /hire charges, of machinery not covered in the Irrigation data, the MORTH data may be taken with the approval of Board of Chief Engineers.
- 5.** For "Drinking water Supply works and Public Health Items (PART-IV)", the data incorporated is generally applicable only for manual means of execution. The rates deploying machinery have to be worked out by the Board of Chief Engineers and approved for adoption.

ROLE OF CENTRAL COMPETENT AGENCY FOR SCHEDULE OF RATES (BOARD OF CHIEF ENGINEERS)

- a) The Board of Chief Engineers under the chairmanship of Engineer-in-charge, (Administration) I & CAD Department is the competent authority to finalise and recommend the Schedule of Rates applicable for all engineering Departments. The board has to assess and incorporate only the three basic inputs required to generate unit work item rates as below.

Basic rates of labour:

Wages of labour commonly required in execution of works has to be arrived and incorporated in the schedule of rates (**Basic Input of Labour Wages**), without adding extra towards area allowances (like municipality allowance, tribal area and ghat road allowances etc, which shall be added to the rates where applicable in the form of separate percentage as explained in the preceding paras. The rates shall be the prevailing daily rates in the State and shall not be less than the minimum wages fixed by the Government from time to time.

Materials rates:

The basic input material rates common to all departmental works are listed out and incorporated (in the chapter "Basic inputs") The material specifications adopted shall conform to Standards published by the BIS.

The Prevailing market rates for all basic input materials shall be obtained from the major commercial centers near the project areas. Average of the rates, ignoring freak rates, shall be reckoned as the prevailing market rate.

Unless otherwise specified, all material rates shall be exclusive of GST, duties, levies, royalty, transportation and handling costs up to project area.

For sand, gravel, murrum, stones, aggregates etc, the rates are for delivery at Quarry including loading charges and idle hire charges. For steel, Cement, AC sheets, GI sheets, Hume pipes, wood and stone slabs, the rates prevailing at major commercial centre near project area has to be adopted.

Use rate of machinery:

The third parameter for incorporation in the Basic Inputs, is the use rate of machinery. To arrive at the use rate of machinery, the inputs to be incorporated are

- The list and capital cost of machinery required to be used in the construction activity,
 - The rate has to be obtained from major manufacturers and outlet sources and the rate shall be the current market price inclusive of all duties and freight charges but exclusive GST.
 - The prevailing fuel charges of petrol and diesel are ascertained and average rate adopted.
 - Borrow rate of interest as fixed by the Government/competent authority be indicated.
 - For the other machinery not covered by the list, the R&B and other users may adopt hire charges as recommended by the MORTH.
- b) The Chairman, Board of Chief Engineers or competent authority appointed by the Government, based on the approved basic inputs, load the above three basic parameters in the software program. The unit rate of all works including hire charges of all machinery will be generated automatically for adoption.

He shall communicate the uniform Schedule of rates arrived from Standard Data, to all users for uniform and direct adoption in all infrastructure Departments, as applicable.

WORK ITEM RATES
FOR THE YEAR -2024-25

* Add Leads and Lifts and Area Allowance as applicable in the estimate

*** Unit Rates arrived without Seigniorage Charges

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
Chapter I					
IRR-DAW		DAM AND ALLIED WORKS			
IRR-DAW-1		EXCAVATION & FOUNDATION TREATMENT WORKS:			
IRR-DAW-1-1	1	Excavation for foundation in all kinds of soil including boulders upto 0.30 m diameter for dam, spillway, intake structure and other appurtenant works and placing the excavated soil neatly in dump area or disposing off the same as directed etc., complete with initial lead upto 1 km and all lifts.	cum	166.24	
		Labour Component (including contractor's profit and Overheads)	cum		41.90
IRR-DAW-1-2	2	Excavation for foundation in ordinary rock (including HDR) without blasting including boulders above 0.3 m upto 0.6 m dia for dam, spillway, intake structure and other appurtenant works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete with initial lead upto 1 km and all lifts.	cum	219.07	
		Labour Component (including contractor's profit and Overheads)	cum		54.30
IRR-DAW-1-3	3	Excavation for foundation in hard rock (including F&F) requiring blasting including boulders above 0.6 m upto 1.2 m dia. for dam, spillway, intake structure and other appurtenant works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete with initial lead upto 1 km and all lifts.	cum	321.62	
		Labour Component (including contractor's profit and Overheads)	cum		95.80
IRR-DAW-1-3-A New Item2015-16-1	4	Excavation for foundation in hard rock (including F&F rock) including boulders above 0.6 m upto 1.2 m dia. by controlled blasting and controlling fly rock by muffling arrangements for dam, spillway, intake structure and other appurtenant works and other open foundation works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete with initial lead upto 1 km and all leads	cum	472.42	
		Labour Component (including contractor's profit and Overheads)	cum		114.00
IRR-DAW-1-4(a)	5	Excavation for foundation in hard rock of all toughness by blasting including boulders above 1.2 m dia. for dam, spillway, intake structure and other appurtenant works and placing the excavated rock neatly in dump area or stack yard including levelling as directed etc., complete with initial lead upto 1 km and all lifts.	cum	566.09	
		Labour Component (including contractor's profit and Overheads)	cum		184.20
IRR-DAW-1-5(b)	6	Excavation for foundation in hard rock of all toughness including boulders above 1.2 m dia. by controlled blasting method and controlling fly-rock by muffling arrangements for dam, spillway, intake structure and other appurtenant structures etc., including placing and levelling the excavated rock neatly in dump area or other place as directed etc., complete with lead upto upto 1 km and all lifts.	cum	861.20	
		Labour Component (including contractor's profit and Overheads)	cum		204.20
IRR-DAW-1-6(c)	7	Excavation for foundation in hard rock of all toughness including boulders above 1.2 m dia. by line drilling and smooth blasting and controlling fly-rock by muffling arrangements for dam, spillway, intake structure and other appurtenant structures etc., including dressing sides and bed to required level / profile, placing and levelling the excavated rock neatly in dump area or other place as directed etc., complete with lead upto 1 km and all lifts. i) For the purpose of payment 1 m width of excavation along boundary of excavation shall be treated as excavation by line drilling and smooth blasting and remaining portion shall be treated as excavation by normal / controlled blasting as the case may be. ii) The rate includes controlling fly-rock wherever required. iii) The rate under this item shall be paid only on ascertaining that the excavated face has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval. iv) In case, where the above criteria is not fulfilled payment shall be restricted to rate provided for excavation by normal blasting or controlled blasting as the case may be.	cum	1231.41	
		Labour Component (including contractor's profit and Overheads)	cum		533.20

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-DAW-1-7	8	Preparing foundation bed for masonry or concrete by benching, stepping, removing all loose material by wedging / chiselling and disposing off the same as directed and cleaning the surface with air and water jet etc., complete with initial lead upto 50 m and all lifts.	sqm	58.30	
		Labour Component (including contractor's profit and Overheads)	sqm		50.40
IRR-DAW-1-8	9	Preparing foundation bed for cut-off trench filling in rock portion by removing all loose materials by wedging / chiselling and disposing off the same as directed etc., complete with initial lead upto 50 m and all lifts.	sqm	42.61	
		Labour Component (including contractor's profit and Overheads)	sqm		42.60
IRR-DAW-1-9	10	Drilling 45 to 50 mm dia holes vertical or inclined upto 10 degrees to vertical in rock / masonry / concrete by percussion drilling using waggon drill or any other suitable equipment including cost of all materials, machinery, labour, redrilling through partially set grout wherever required etc., complete for drilling upto 6 m depth from surface. The item rate for drilling through rock / masonry / concrete includes redrilling through partially set grout, if any, in the portion of the hole drilled and grouted.	Rm	259.19	
		Beyond 6 m upto 12 m from surface :	Rm	285.11	
		Beyond 12 m upto 18 m from surface :	Rm	313.62	
		Beyond 18 m upto 24 m from surface	Rm	344.98	
		Beyond 24 m upto 30 m from surface	Rm	379.48	
		Beyond 30 m upto 36 m from surface	Rm	417.43	
		Beyond 36 m upto 42 m from surface	Rm	459.17	
		Beyond 42 m upto 48 m from surface	Rm	505.09	
		Labour Component (including contractor's profit and Overheads)	Rm		80.70
IRR-DAW-1-10	11	Flushing grout holes of all sizes with water and air jets alternatively for an average period of 30 minutes including water intake observations after flushing, cost of all materials, machinery, labour etc., complete.	Rm	68.69	
		Labour Component (including contractor's profit and Overheads)	Rm		32.60
IRR-DAW-1-11(a)	12	Consolidation grouting with neat cement grout mix of suitable consistency under specified pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete with initial lead upto 1 km and all lifts.	tonne	10968.44	
		Labour Component (including contractor's profit and Overheads)	tonne		5174.70
IRR-DAW-1-12(b)	13	Curtain grouting with neat cement grout mix of suitable consistency under specified pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete with initial lead upto 1 km and all lifts.	tonne	12633.06	
		Labour Component (including contractor's profit and Overheads)	tonne		6678.70
IRR-DAW-1-13	14	Providing and fixing 25 mm dia 3 m long cold twisted deformed steel dowel bars with one end driven into 45 to 50 mm diameter 1.50 m deep hole drilled in bed rock and other end provided with L-bend for embedding in concrete / masonry of over flow / non-over flow blocks and other appertenant works including cost of drilling and cleaning hole, filling hole with cement mortar 1 : 1 proportion , driving anchor rod, cost of all materials, machinery, labour etc., complete with initial lead upto 1 km and all lifts.	Each	1309.95	
		Labour Component (including contractor's profit and Overheads)	Each		188.70
IRR-DAW-1-14	15	Providing and fixing 25 mm dia. 2.75 m long ribbed steel anchor rods with one end split and driven firmly using steel wedge into 1.25 m deep 45 to 50 mm dia. hole drilled in bed rock and other end provided with L- bend for embedding in concrete / masonry for spillway and appurtenant works including drilling and cleaning hole, filling hole with thick cement slurry, driving anchor rod, cost of all materials, machinery, labour, steel wedge etc., complete with initial lead upto 1 km and all lifts.	Each	1222.16	
		Labour Component (including contractor's profit and Overheads)	Each		215.40
IRR-DAW-2		REINFORCEMENT & CEMENT CONCRETE WORKS :			
IRR-DAW-2-1A	16	Providing, fabricating and placing in position reinforcement steel for RCC, below 36 dia rods overlaps and wastages wherever required, tying with 1.25 mm diameter soft annealed steel wire, including cost of all materials, machinery, labour etc., complete with initial lead upto 1 km and all lifts.	tonne	77887.73	
		Labour Component (including contractor's profit and Overheads)	tonne		6555.40

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-DAW-2-1B	17	Providing, fabricating and placing in position reinforcement steel for RCC above 36 dia with welding and wastage at 2.5%, tying with 1.25 mm diameter soft annealed steel wire, including cost of all materials, machinery, labour etc., complete with initial lead upto 1 km and all lifts.	tonne	80226.45	
		Labour Component (including contractor's profit and Overheads)	tonne		8529.40
IRR-DAW-2-2	18	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 250 kg /cum with use of super plasticiser equa to 0.4% of cement content, CA : 0.98 cum, Blending Ratio of CA -- 40:30:20:10, FA : 0.35 cum)	cum	4095.76	
		Labour Component (including contractor's profit and Overheads)	cum		303.70
IRR-DAW-2-2A (new Item1 2010-11)	19	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 300 kg /cum with use of super plasticiser equa to 0.4% of cement content, CA : 0.90 cum, Blending Ratio of CA -- 40:30:20:10, FA : 0.4 cum)	cum	4295.15	
		Labour Component (including contractor's profit and Overheads)	cum		303.70
IRR-DAW-2-3	20	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 220 kg /cum with use of super plasticiser, CA: 0.98 cum, Blending Ratio of CA - -40:30:20:10, FA: 0.37 cum)	cum.	3944.77	
		Labour Component (including contractor's profit and Overheads)	cum.		303.70
IRR-DAW-2-4	21	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for RCC works of gallery, sluice, spillway crest, spillway d / s face, energy dissipating structures, training walls, piers, abutments and such other locations with initial lead upto 1 km and all lifts. (Cement content : 310 kg / cum with use of super plasticiser, CA : 0.90 cum, blending ratio of CA--50:30:20, FA : 0.40 cum)	cum.	5669.57	
		Labour Component (including contractor's profit and Overheads)	cum.		610.20
IRR-DAW-2-4A (new Item2 2010-11)	22	Providing and laying insitu vibrated M-25 (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for RCC works of gallery, sluice, spillway crest, spillway d / s face, energy dissipating structures, training walls, piers, abutments and such other locations with initial lead upto 1 km and all lifts. (Cement content : 360 kg / cum with use of super plasticiser,CA : 0.90 cum, blending ratio of CA--50:30:20, FA : 0.40 cum)	cum.	5947.74	
		Labour Component (including contractor's profit and Overheads)	cum.		610.20
IRR-DAW-2-4B (new Item3 2010-11)	23	Providing and laying insitu vibrated M-25 (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for RCC works of gallery, sluice, spillway crest, spillway d / s face, energy dissipating structures, training walls, piers, abutments and such other locations with initial lead upto 1 km and all lifts. (Cement content : 380 kg / cum with use of super plasticiser,CA : 0.90 cum, blending ratio of CA--65:35, FA : 0.40 cum)	cum.	6027.66	
		Labour Component (including contractor's profit and Overheads)	cum.		610.20

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-DAW-2-5	24	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 260 kg /cum with use of super plasticiser,CA : 0.90 cum, Blending Ratio of CA -- 50:30:20, FA : 0.40 cum)	cum.	5822.07	
		Labour Component (including contractor's profit and Overheads)	cum.		2241.10
IRR-DAW-2-6	25	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates with placing and sinking plums of size 150 to 80 mm upto 15 percent for gravity type structures including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete with initial lead upto 1 km and all lifts. (Cement content : 260 kg / cum of concrete with use of plums and super plasticiser,, CA : 0.77 cum, Blending Ratio of CA : 50:30:20,FA : 0.34 cum, plums of size 150 to 80 mm : 0.25 cum)	cum.	5653.11	
		Labour Component (including contractor's profit and Overheads)	cum.		2194.20
IRR-DAW-2-7	26	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content 220 kg /cum with use of super plasticiser,CA : 0.90 cum, Blending Ratio of CA : 50:30:20, FA : 0.40 cum)	cum.	5396.38	
		Labour Component (including contractor's profit and Overheads)	cum.		2030.90
IRR-DAW-2-8	27	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 280 kg /cum with use of super plasticiser,CA : 0.80 cum, Blending Ratio of CA - 65:35, FA : 0.44 cum)	cum.	5593.84	
		Labour Component (including contractor's profit and Overheads)	cum.		2079.30
IRR-DAW-2-9	28	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for RCC works of spillway bridge, blockouts and such other similar structures with congested reinforcement with initial lead upto 1 km and all lifts. (Cement content : 330 kg / cum with use of super plasticiser, CA : 0.80 cum, Blending Ratio of CA -- 65:35, FA : 0.44 cum).	cum.	8097.55	
		Labour Component (including contractor's profit and Overheads)	cum.		2937.40
IRR-DAW-2-10	29	Providing and forming porous concrete body drain of size 68.5 x 68.5 cm with 23 cm diameter central hole using cement and 20 mm down approved, clean, hard, graded coarse aggregates in 1 : 3.50 proportion by volume including cost of all materials, machinery, labour, formwork, curing etc., complete with initial lead upto 1 km and all lifts.(M15 Cement content : 400kg/cum, CA : 1cum, Blending Ratio of CA -- 65:35)	Rm	2911.52	
		Labour Component (including contractor's profit and Overheads)	Rm		1005.80

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-DAW-2-11(a)	30	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for RCC solid parapet consisting of 35 cm x 20 cm kerb, 35 cm x 35 cm x 1 m pillars spaced approximately at 3.35 m c / c, 12.5 cm thick wall 80 cm height with 12.5 cm thick and 35 cm wide coping slab for wall and 12 .5 cm thick 40 cm x 40 cm coping for pillars with top edges of kerb and coping chamfered / rounded as directed etc., complete (excluding cost of providing and placing reinforcement steel and gate) with initial lead upto 1 km and all lifts. (Cement content 350 kg / cum with use of super plasticiser(0.4% by wt.of cement), CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.44 cum)	Rm	3186.62	
		Labour Component (including contractor's profit and Overheads)	Rm		1247.90
IRR-DAW-2-12(b)	31	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for RCC ornamental parapet consisting of 35 cm x 20 cm kerb, 35 cm x 35 cm x 1 m pillars spaced approximately at 3.5 m apart, 20 cm x 15 cm posts 80 cm height approximately 30 cm c / c with 12.5 cm thick and 35 cm wide coping slab for posts and pillars with top edges of kerb and coping chamfered or rounded as directed etc., complete (excluding cost of providing and placing reinforcement steel and gate) with initial lead upto 1 km and all lifts. (Cement content : 350 kg / cum with use of super plasticiser, CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.44 cum)	Rm	3331.81	
		Labour Component (including contractor's profit and Overheads)	Rm		1323.20
IRR-DAW-2-13	32	Providing and laying insitu M- 25 (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for wearing coat including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position in alternate panels, levelling, compacting, finishing, curing, packing joints with asphalt mortar etc., complete with initial lead upto 1 km and all lifts. (Cement content : 380 kg / cum with use of super plasticiser, CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.45 cum)	cum	6365.51	
		Labour Component (including contractor's profit and Overheads)	cum		2530.90
IRR-DAW-2-14	33	Pre-cooling to control placement temperature of cement concrete in the range of 18 to 21 C at the concrete placement point by inundation of coarse aggregates and adding flaked ice as part of mixing water including cost of all materials, machinery, labour etc., complete with all leads and lifts.	cum	99.68	
		Labour Component (including contractor's profit and Overheads)	cum		23.50
IRR-DAW-2-15	34	Conveying and fixing elastomeric bearing for spillway bridge including cleaning and preparing surface, mixing and applying adhesive, fixing bearing in correct position etc., including cost of all materials except bearings, machinery, labour etc., complete with all leads and lifts.	Each	591.52	
		Labour Component (including contractor's profit and Overheads)	Each		533.10
IRR-DAW-2-16	35	Providing and constructing 150 mm dia hume pipe weep holes for concrete / masonry walls including providing 20 x 20 x 20 cm size porous concrete block made of cement and 20 mm down coarse aggregate in 1 : 4 proportion including 10 cm thick sand backing at the junction of wall and soil back fill, cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts.	Rm	477.20	
		Labour Component (including contractor's profit and Overheads)	Rm		116.90
IRR-DAW-2-17	36	Providing and forming expansion joint for spillway bridge consisting of 75 x 75 x 6 mm angles 2 numbers provided with 25 cm long 12 mm dia. anchors fixed to both flanges at 15 cm c / c and 140 x 6 mm plate welded on top of one of the angle including cost of all materials, machinery, labour, providing and fixing 38 mm thick joint filler board matching the thickness of wearing coat, painting etc., complete with lead upto 1 km and all lifts.	Rm	2687.25	
		Labour Component (including contractor's profit and Overheads)	Rm		531.40

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR_DAW-3		MASONRY & GUNITING WORKS :			
IRR_DAW-3-1	37	Providing and constructing un-coursed rubble stone masonry using approved stones in cement mortar 1 : 3 proportion including cost of all materials, machinery, labour, scaffolding, cleaning, packing mortar, wedging stone chips, curing etc., complete with initial lead upto 1 km and all lifts. (Cement content : 190 kg/cum of masonry, rubble stones : 0.85 cum,stone chips : 0.15 cum/cum, FA : 0.4 cum)	cum	3684.72	
		Labour Component (including contractor's profit and Overheads)	cum		1884.30
IRR_DAW-3-2	38	Providing and constructing un-coursed rubble stone masonry using approved stones in cement mortar 1 : 4 proportion including cost of all materials, machinery, labour, scaffolding, cleaning, packing mortar, wedging stone chips, curing etc., complete with initial lead upto 1 km and all lifts. (Cement content : 143 kg/cum of masonry, rubble stones : 0.85 cum, stone chips : 0.15 cum/cum, FA : 0.4 cum)	cum	3459.37	
		Labour Component (including contractor's profit and Overheads)	cum		1884.30
IRR_DAW-3-3	39	Providing and constructing coursed rubble face stone masonry using approved rubble stones in cement mortar 1 : 3 proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., with initial lead upto 1 km and all lifts. (Thickness of the CR face assumed: 0.75 m, Cement content : 178 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.375 cum, CR stones 30 x 30 x 45 cm : 9.75 No, CR stones 30 x 30 x 60 cm : 3.25 No)	cum	4065.55	
		Labour Component (including contractor's profit and Overheads)	cum		2087.90
IRR_DAW-3-4	40	Providing and constructing coursed rubble face stone masonry using approved rubble stones in cement mortar 1 : 4 proportion including cost of all materials, machinery, labour, scaffolding,ramps, cleaning, packing mortar, wedging stone chips, curing etc., with initial lead upto 1 km and all lifts. (Cement content : 134 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.375 cum, CR stones 30 x 30 x 45 cm : 9.75 No, CR stones 30 x 30 x 60 cm : 3.25 No)	cum	3854.59	
		Labour Component (including contractor's profit and Overheads)	cum		2087.90
IRR_DAW-3-5	41	Providing and constructing chisel drafted and hammer dressed face stone masonry with approved stones in cement mortar 1 : 3 proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., complete with initial lead upto 1 km and all lifts. (Cement content : 167 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.35 cum, Dressed stones 30 x 30 x 45 cm : 10 No, Dressed stones 30 x 30 x 60 cm : 3.40 No)	cum	4450.50	
		Labour Component (including contractor's profit and Overheads)	cum		2533.30
IRR-DAW-3-6	42	Providing and constructing chisel drafted and hammer dressed face stone masonry with approved stones in cement mortar 1 : 4 proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., complete with initial lead upto 1 km and all lifts. (Cement content : 125 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.35 cum, Dressed stones 30 x 30 x 45 cm : 10 No, Dressed stones 30 x 30 x 60 cm : 3.40 No)	cum	4249.09	
		Labour Component (including contractor's profit and Overheads)	cum		2533.30
IRR-DAW-3-7	43	Providing cement mortar pointing to coursed rubble face stone masonry 50 mm deep in CM 1 : 2 proportion by volume including raking and cleaning joints, pressing mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 1 km and all lifts.	sqm	176.50	
		Labour Component (including contractor's profit and Overheads)	sqm		148.30
IRR-DAW-3-8	44	Providing cement mortar pointing to coursed rubble face stone masonry 50 mm deep in CM 1 : 3 proportion by volume including raking and cleaning joints, pressing mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 1 km and all lifts.	sqm	170.09	
		Labour Component (including contractor's profit and Overheads)	sqm		148.30

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR_DAW-4		CONTRACTION JOINT WORKS:			
IRR-DAW-4-1	45	Providing 25 mm thick guniting to rock or masonry surface in cement mortar 1 : 3 proportion by weight including cost of all materials, machinery, labour, raking-out and cleaning joints, scaffolding wherever required and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts.	sqm	620.02	
		Labour Component (including contractor's profit and Overheads)	sqm		290.30
IRR-DAW-4-2	46	Providing and constructing contraction joints by fixing 16 SWG 60 cm wide annealed copper sheets in two lines with 8 mm dia steel dowel rods on either side at one metre interval, forming 125 x 125 mm size groove in between copper strips for filling asphalt including fixing 15 mm dia two legged G.I pipe with U - bend at bottom for circulation of steam at intervals and forming 150 mm dia formed drain behind water seals including cost of all materials, machinery, labour, filling asphalt, circulation of steam through pipes etc., complete with all leads and lifts.	Rm	17408.80	
		Labour Component (including contractor's profit and Overheads)	Rm		297.10
IRR-DAW-4-3	47	Providing and constructing contraction joints by fixing 310 mm wide central bulb type approved quality PVC water stop in two lines with 8 mm diameter steel dowel rods on either side at 1m interval, forming 125 x 125 mm size groove in between two water stops, providing & fixing 15 mm dia two legged G.I pipe with U-bend at bottom for circulation steam at interval, forming 150 mm diameter formed drain behind water seals including filling groove with asphalt, circulation of steam at intervals, cost of all materials, machinery, labour etc., complete with all leads and lifts.	Rm	2643.49	
		Labour Component (including contractor's profit and Overheads)	Rm		200.80
IRR-DAW-4-4	48	Providing and constructing contraction joints by fixing 16 SWG 60 cm wide annealed copper sheets in single line with 8 mm dia steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour etc., complete with all leads and lifts.	Rm	8167.48	
		Labour Component (including contractor's profit and Overheads)	Rm		229.80
IRR-DAW-4-5	49	Providing and constructing contraction joints by fixing 23 cm wide central bulb type PVC water stop in single line supported by 10 mm dia steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour, valcunising joints etc., complete with all leads and lifts.	Rm	326.02	
		Labour Component (including contractor's profit and Overheads)	Rm		186.10
IRR-DAW-5		EARTH / ROCKFILL EMBANKMENT WORKS :			
IRR-DAW-5-1	50	Providing hearting embankment using selected impervious soil from approved borrow areas in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, watering, compacting to density control of not less than 95 percent or as stipulated using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	183.74	
		Labour Component (including contractor's profit and Overheads)	cum		35.00
IRR-DAW-5-2	51	Providing cut-off trench filling using selected impervious soil from approved borrow areas in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting to density control of not less than 95 percent using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller as stipulated etc., complete with initial lead upto 1 km and all lifts.	cum	197.70	
		Labour Component (including contractor's profit and Overheads)	cum		38.10
IRR-DAW-5-3	52	Providing casing embankment using semi-pervious soil from approved borrow areas in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all other operations such as excavation, sorting out, transportation, spreading soil in layers of specified thickness, breaking clods, sectioning, watering, compacting to density control of not less than 95 percent using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller as stipulated etc., complete with initial lead upto 1 km and all lifts.	cum	197.90	
		Labour Component (including contractor's profit and Overheads)	cum		37.90

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-DAW-5-4	53	Providing casing embankment using semi-pervious soil available from excavation in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all other operations such as re-excavation, sorting out, transportation, spreading in layers of specified thickness, breaking clods, sectioning, watering, compacting to specified density control of not less than 95 percent using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller as stipulated etc., complete with initial lead upto 1 km and all lifts.	cum	167.11	
		Labour Component (including contractor's profit and Overheads)	cum		32.30
IRR-DAW-5-4-A (New Item1 - 2011-12)	54	Providing casing embankment using semi-pervious soil available from excavation in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all other operations such as re-excavation, sorting out, transportation, spreading in layers of specified thickness, breaking clods, sectioning, watering, compacting to specified density control of not less than 90 percent using 2Tonne Roller as stipulated etc., complete with initial lead upto 1 km and all lifts. (For Maintenance Works)	cum	115.74	
		Labour Component (including contractor's profit and Overheads)	cum		32.30
IRR-DAW-5-5	55	Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, watering, compacting to density control of not less than 95 percent or as stipulated using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	186.92	
		Labour Component (including contractor's profit and Overheads)	cum		35.70
IRR-DAW-5-6	56	Providing embankment adjacent to masonry / concrete structures and filling trial pits using impervious soil from approved borrow areas in layers of 10 to 15 cm and compacting each layer to density control of not less than 95 percent using pneumatic tampers or by vibratory earth rammers including cost of all materials, machinery, labour, picking previous layer, spreading soil in layer, breaking clods, watering etc., complete with initial lead upto 1 km and all lifts.	cum	375.30	
		Labour Component (including contractor's profit and Overheads)	cum		198.10
IRR-DAW-5-7	57	Providing and constructing rockfill embankment with 300 mm down graded stones and quarry spalls from approved source including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing the surface to required slopes etc., complete with initial lead upto 1 km and all lifts.	cum	600.27	
		Labour Component (including contractor's profit and Overheads)	cum		177.60
IRR-DAW-5-8	58	Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto 1 km and all lifts.	cum	736.85	
		Labour Component (including contractor's profit and Overheads)	cum		344.30
IRR-DAW-5-9	59	Providing and constructing dry rubble rock-toe with rubble and stone chips from dump yard including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto 1 km and all lifts. Note: Useful rubble and stone chips will be issued at dump yard at the issue rate for usefull rubble /stone chips. Sorting out and breaking charges included in rate analysis.	cum	656.21	
		Labour Component (including contractor's profit and Overheads)	cum		243.50
IRR-DAW-5-9-A (New Item1- 2020-21)	60	Providing and constructing dry rock pitching for groynes/platform using un-coursed rubble stone of size 300 mm thick from quarry to site of work including cost of all materials, machinery, labour charge hand picking un-coursed rubble stone to the designed profile with all leads and all lifts etc for Above Water level.	cum	833.00	
		Labour Component (including contractor's profit and Overheads)	cum		243.50
IRR-DAW-5-9-B (New Item2(2020-21)	61	Providing and constructing dry rock pitching for groynes using un-coursed rubble stone of size 300 mm thick and un-coursed rubble stone chips from quarry to site of work including cost of all materials, machinery, labour charge hand picking un-coursed rubble stone and chips to the designed profile with all leads and all lifts etc for Below Water level.	cum	616.79	
		Labour Component (including contractor's profit and Overheads)	cum		27.30

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-DAW-5-10	62	Providing and laying 30 cm diameter open jointed hume pipes with collars in rock-toe for drainage including cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts.	Rm	795.87	
		Labour Component (including contractor's profit and Overheads)	Rm		55.10
IRR-DAW-6		FILTER & PITCHING WORKS :			
IRR-DAW-6-1	63	Providing and constructing 1.20 m internal diameter and average 3 m height RCC manhole with 60 cm dia. top cover in M-15 grade cement concrete using 20 mm down graded , clean, hard coarse aggregate, 20 cm thick for bed / sides / top slab / 1.5 m long cut-off wall and 7.5 cm thick for cover including providing 12 mm dia reinforcement bars at 30 cm c / c bothways for bed / sides / cut-off wall / top slab / rungs and 8 mm dia bars at 15 cm c / c bothways for cover, excavation for foundation, providing 30 cm dia hume pipe outlet, cost of all materials, machinery, labour, formwork, scaffolding, batching, mixing, laying, vibrating, finishing, curing etc., complete with lead upto 1 km and all lifts. (Cement content : 300 kg/cum , CA : 0.80 cum, Blending Ratio of CA -- 65:35,FA : 0.44 cum, superplasticizer (0.4% by wt. of cement))	Each	60204.56	
		Labour Component (including contractor's profit and Overheads)	Each		18719.90
IRR-DAW-6-2	64	Providing and constructing longitudinal and cross graded filter drains using sand and 80-20 mm and 20 mm down graded aggregates satisfying specified filter criteria in layers as per specifications including cost of all materials, machinery, labour, laying to required slopes, compaction etc. complete with initial lead upto 50 m and all lifts.	cum	1305.60	
		Labour Component (including contractor's profit and Overheads)	cum		265.70
IRR-DAW-6-3	65	Providing and constructing 1.40 m thick vertical or inclined graded filter media consisting of 20 cm thick sand layers, 25 cm thick 20 mm down coarse aggregate layers and 50 cm thick 80-20 mm coarse aggregate layer using approved materials satisfying specified filter criteria as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., complete with initial lead upto 50 m and all lifts.	cum	1400.86	
		Labour Component (including contractor's profit and Overheads)	cum		265.70
IRR-DAW-6-4	66	Providing and constructing graded filter media below and behind rock-toe consisting of 20 cm thick sand, 25 cm thick 20 - 4.75 mm and 40 cm thick 80 - 20 mm size graded coarse aggregates satisfying filter criteria as per specifications including cost of all materials, labour, machinery, laying to required slope, compaction etc., complete with initial lead upto 50 m and all lifts.	cum	1325.66	
		Labour Component (including contractor's profit and Overheads)	cum		238.70
IRR-DAW-6-4-A (New Item 2011-12)	67	Providing and constructing graded filter media below and behind rock-toe consisting of 30 cm thick, 80 - 20 mm size graded coarse aggregates satisfying filter criteria as per specifications including cost of all materials, labour, machinery, laying to required slope, compaction etc., complete with initial lead upto 50 m and all lifts.	cum	1450.98	
		Labour Component (including contractor's profit and Overheads)	cum		90.00
IRR-DAW-6-5	68	Providing and laying filter media consisting of 2 layers of 250 gsm poly-propylene non-woven filter fabric and 400 mm thick 20 mm down graded coarse aggregate for vertical / inclined and horizontal filter blanket for embankment including cost of all materials, machinery, labour etc., complete with lead upto 50 m for aggregate and all leads for fabric and all lifts.	sqm	1079.63	
		Labour Component (including contractor's profit and Overheads)	sqm		103.50
IRR-DAW-6-6	69	Providing and constructing 45 cm thick chimney filter using clean approved sand satisfying filter criteria including cost of all materials, machinery, labour, compacting etc., complete with initial lead upto 50 m and all lifts.	cum	933.35	
		Labour Component (including contractor's profit and Overheads)	cum		211.70
IRR-DAW-6-7	70	Providing and constructing 90 cm thick transition cum filter media behind rockfill using approved sand and 80-20 mm and 20 mm down graded aggregates satisfying the filter criteria in layers of 30 cm thickness each as per specifications including cost of all materials, machinery, labour, laying each layer to required slope, compaction etc., complete with initial lead upto 50 m and all lifts.	cum	1384.77	
		Labour Component (including contractor's profit and Overheads)	cum		279.30

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-DAW-6-8	71	Providing and constructing 60 cm thick hand packed rough stone revetment with 65 to 75 cm long through stones at 1.50 m c / c over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size approved graded aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts.	sqm	1193.27	
		Labour Component (including contractor's profit and Overheads)	sqm		304.60
IRR-DAW-6-9	72	Providing and constructing 60 cm thick hand packed rough stone revetment with 65 to 75 cm long through stones at 1.50 m c / c over a backing of 60 cm thick graded filter media consisting of sand, 10 mm and 40 mm size approved graded aggregates laid in layers of 20 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts.	sqm	1416.00	
		Labour Component (including contractor's profit and Overheads)	sqm		345.20
IRR-DAW-6-10	73	Providing and constructing 60 cm thick hand packed rough stone riprap over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips etc., complete with initial lead upto 50 m and all lifts.	sqm	1097.89	
		Labour Component (including contractor's profit and Overheads)	sqm		234.50
IRR-DAW-6-11	74	Providing and constructing 75 cm thick hand packed rough stone riprap over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips, etc., complete with initial lead upto 50 m and all lifts.	sqm	1196.58	
		Labour Component (including contractor's profit and Overheads)	sqm		255.30
IRR-DAW-6-12	75	Providing and constructing 90 cm thick hand packed rough stone riprap over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips etc., complete with initial lead upto 50 m and all lifts.	sqm	1318.72	
		Labour Component (including contractor's profit and Overheads)	sqm		296.90
IRR-DAW-6-13	76	Providing and laying Hariyala or other approved quality turfing sods for the slopes of earthen embankments over 20 mm thick sand backing including cost of all materials, machinery, labour including preparing surface, spreading sand, watering for 15 days etc., complete with initial lead upto 1 km and all lifts.	sqm	158.39	
		Labour Component (including contractor's profit and Overheads)	sqm		117.60
Chapter II					
IRR-TAW		TUNNEL AND ALLIED WORKS			
IRR-TAW-1		EXCAVATION :			
IRR-TAW-1-1	77	Excavation for adit by tunnelling methods in all types of rock including cost of all materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage, removing and hauling the excavated muck outside adit upto specified dump area and all other ancillary operations etc., complete with initial lead upto 50 m and all lifts.	cum	2355.83	
		Labour Component (including contractor's profit and Overheads)	cum		1027.00
IRR-TAW-1-2	78	Excavation for vertical / inclined shaft in all types of soft / hard rock including cost of all materials, machinery, labour, shoring, strutting, scaling excavated surface, ventilation, lighting, drainage, removing and hauling excavated muck outside shaft upto specified dump area and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts.	cum	3386.44	
		Labour Component (including contractor's profit and Overheads)	cum		2084.60
IRR-TAW-1-3	79	Excavation for tunnel by tunnelling methods in rock not requiring supports including cost of all materials, machinery, labour, scaling excavated surface, removing under-cuts, ventilation, lighting, drainage, removing and hauling the excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts.	cum	2415.42	
		Labour Component (including contractor's profit and Overheads)	cum		1012.90

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-TAW-1-4	80	Excavation for tunnel by tunnelling methods including excavation for supports in all types of soil / rock strata requiring supports (excluding cost of providing supports) including cost of all other materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage, removing and hauling the excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts.	cum	2490.86	
		Labour Component (including contractor's profit and Overheads)	cum		1046.30
IRR-TAW-1-5	81	Excavation for tunnel by heading and benching tunnelling methods including excavation for supports in all types of soil / rock strata requiring supports (excluding cost of providing supports) for roof before benching including cost of all other materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage removing and hauling excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts. NOTE: Where mucking is to be carried out through shaft using winch and mucking tub system increase the basic rates for items 3, 4 & 5 by 8 percent.	cum	2570.38	
		Labour Component (including contractor's profit and Overheads)	cum		1119.30
IRR-TAW-1-6	82	Removing and hauling muck overfallen due to natural causes such as geological faults etc., out of tunnel including breaking large fragments by blasting if necessary and disposing off the same in specified dump area or as directed including cost of all materials, machinery, labour, ventilation, drainage, lighting and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts.	cum	490.29	
		Labour Component (including contractor's profit and Overheads)	cum		157.70
IRR-TAW-2		DEWATERING & GUNITING WORKS :			
IRR-TAW-2-1	83	Dewatering tunnel by pumping out water collected by natural drainage inside tunnel including providing sump wherever necessary, cost of all materials, machinery, labour, drainage, lighting, ventilation and all other ancillary operations etc., complete.	Kwhr	32.34	
		Labour Component (including contractor's profit and Overheads)	Kwhr		14.50
IRR-TAW-2-2	84	Providing 25 mm thick guniting to sides and arch of tunnel in cement mortar 1 : 3 proportion by weight including cost of all materials, machinery, labour, ventilation, lighting, drainage and all other ancillary operations etc., complete with lead upto 1 km and all lifts.	sqm	766.48	
		Labour Component (including contractor's profit and Overheads)	sqm		327.60
IRR-TAW-2-3 (new Item 4 2010-11)	85	Shortcreting in two layers (each layer+38 mm thickness) for slabs duly fixing chain weld wire mesh 100 x 100x5 mm in between the two layers including cost and conveyance of all materials, labour charges, all heads, lifts, centering, scaffolding, machine mixing, laying concrete with shortcrete machine etc. complete as per specification and as directed by Engineer-in-Charge	sqm	1790.37	
		Labour Component (including contractor's profit and Overheads)	sqm		327.60
IRR-TAW-3		TEMPORARY & PERMANENT SUPPORTS :			
IRR-TAW-3-1	86	Providing and fixing 25 mm diameter steel rock bolts with mechanical / wedge type anchorage including drilling 35 mm dia holes, providing 15 cm long 20 mm thick steel tapered wedge, 10 mm thick plate washers and nuts, tightening bolt by torque wrench, cost of all materials, machinery, labour, ventilation, lighting, drainage and all other ancillary operations etc., complete with lead upto 1 km and all lifts.	Rm	1571.66	
		Labour Component (including contractor's profit and Overheads)	Rm		539.20
IRR-TAW-3-2	87	Providing and fixing 25 mm diameter steel rock bolts with resin bond cement capsule anchorage including drilling 35 mm dia holes, inserting grout capsule, driving bolt, fixing 10 mm thick plate washers and nuts and tightening the same by torque wrench after hardening of cement grout, cost of all materials, machinery, labour, ventilation, lighting, drainage and other ancillary operations etc., complete with lead upto 1 km and all lifts.	Rm	1499.34	
		Labour Component (including contractor's profit and Overheads)	Rm		498.90
IRR-TAW-3-3	88	Providing, fabricating and fixing in position permanent structural steel supports as per details including cost of all materials, machinery, labour, cutting, bending, welding, grinding, lighting, ventilation, drainage and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts.	tonne	131291.29	
		Labour Component (including contractor's profit and Overheads)	tonne		29049.30

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-TAW-3-4	89	Providing, fabricating and fixing in position temporary structural steel supports as per details and dismantling the same before concreting including cost of all materials, machinery, labour, cutting, bending, welding, grinding, ventilation, lighting, drainage and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts.	tonne	31766.88	
		Labour Component (including contractor's profit and Overheads)	tonne		14561.10
IRR-TAW-3-5	90	Providing and fixing hard variety cut jungle wood for lagging / blocking locations in tunnel wherever required including cost of all materials, machinery, labour, fixing in position, lighting, ventilation, drainage etc complete with all leads and lifts.	cum	33280.92	
		Labour Component (including contractor's profit and Overheads)	cum		2710.20
IRR-TAW-4		MASONRY WORKS :			
IRR-TAW-4-1	91	Providing and constructing un-coursed rubble stone masonry with approved stones from tunnel excavated muck in cement mortar 1 : 6 proportion for backfilling over cuts / slips on tunnel sides due to geological faults etc., including cost of all materials, machinery, labour, cleaning, scaffolding, packing mortar, wedging stone chips, curing, ventilation, lighting, drainage complete with lead upto 1 km and all lifts. (cement content : 95 kg/cum of masonry, Rubble stones : 0.83 cum, Stone chips : 0.13 cum, FA : 0.40 cum)	cum	3051.92	
		Labour Component (including contractor's profit and Overheads)	cum		1466.70
IRR-TAW-5		REINFORCEMENT & CONCRETE WORKS :			
IRR-TAW-5-1	92	Providing, fabricating and placing in position reinforcement steel for tunnel RCC works including cleaning, straightening, cutting, bending, hooking, lapping / welding joints wherever required, tying with 1.25 mm dia. soft annealed steel wire, including cost of all materials, labour, machinery, ventilation, lighting, drainage etc., complete with initial lead upto 1 km and all lifts.	tonne	99405.54	
		Labour Component (including contractor's profit and Overheads)	tonne		18831.70
IRR-TAW-5-2	93	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates crushed from tunnel excavated muck for filling and levelling over-cuts in bed due to geological faults etc., including cost of all materials, machinery, labour, cleaning bed, batching, mixing, conveying and laying, levelling, compacting, finishing, curing, lighting, ventilation, drainage etc., complete with initial lead upto 1 km and all lifts. (Cement content : 220 kg / cum, CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum, Superplasticizer 0.4% by wt. of cement)	cum	6630.88	
		Labour Component (including contractor's profit and Overheads)	cum		1417.60
IRR-TAW-5-3	94	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sqmm) grade cement concrete using 40 mm and down size approved clean, hard, graded aggregates crushed from tunnel muck for kerb and bed lining including cost of all materials, machinery, labour, formwork, batching, mixing, conveying upto placing point in agitator cars, placing in position, levelling, vibrating, finishing, curing, ventilation, lighting, drainage and all other ancillary operations etc., complete with lead upto 1 km and all lifts. (Cement content 330 kg / cum for use of super plasticiser(0.4% by wt. of cement), CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)	cum	7928.61	
		Labour Component (including contractor's profit and Overheads)	cum		1765.30

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-TAW-5-4	95	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sqmm) grade cement concrete using 40 mm and down size approved clean, hard, graded aggregates crushed from tunnel muck for sides and arch lining including cost of all materials, machinery, labour, formwork, batching, mixing, conveying upto placing point in agitator cars, placing in position, levelling, vibrating, finishing, curing, ventilation, lighting, drainage and all other ancillary operations etc., complete with lead upto 1 km and all lifts. (Cement content 330 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)	cum	8724.32	
		Labour Component (including contractor's profit and Overheads)	cum		1430.50
IRR-TAW-6		DRILLING & GROUTING WORKS :			
IRR-TAW-6-1	96	Drilling 32 mm diameter grout holes in concrete / rock by percussion drilling using jack hammer or stooper drills as directed to specified depth for consolidation / contact grouting including cost of all materials, machinery, labour, cleaning holes, ventilation, lighting, drainage and all other ancillary operations etc., complete.	Rm	539.99	
		Labour Component (including contractor's profit and Overheads)	Rm		259.20
IRR-TAW-6-2	97	Grouting cement slurry in grout holes under specified pressure for consolidation / contact grouting including cost of all materials, machinery, labour, redrilling wherever necessary, ventilation, lighting, drainage and other ancillary operations etc., complete with lead upto 1 km and all lifts.	tonne	11344.69	
		Labour Component (including contractor's profit and Overheads)	tonne		4043.00
IRR-TAW-6-3	98	Drilling 75 mm diameter drainage holes vertical or inclined in rock / concrete in tunnel by percussion drilling using waggon drill or other suitable drilling equipment including cost of all materials, machinery, labour, ventilation, lighting, drainage etc., complete.	Rm	460.98	
		Labour Component (including contractor's profit and Overheads)	Rm		106.80
Chapter III					
IRR-CAW		CANAL AND ALLIED WORKS			
IRR-CAW-1		EXCAVATION WORKS :			
IRR-CAW-1-1	99	Excavation in all kinds of soil including boulders upto 0.3 m diameter for canal , seating of embankment, filter drains / catch water drains etc., including dressing bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated soil neatly in dump area or for the formation of service road / embankment as directed etc., complete with initial lead upto 1 km and all lifts.	cum	132.87	
		Labour Component (including contractor's profit and Overheads)	cum		42.80
IRR-CAW-1-2	100	Excavation in all kinds of soil including boulders upto 0.30 m dia for field channels , seating of embankment for field channels etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road / embankment as directed etc., complete with lead upto 10 m and lift upto 3 m. (Machinery excavation and manual conveyance)	cum	74.01	
		Labour Component (including contractor's profit and Overheads)	cum		35.80
IRR-CAW-1-3	101	Excavation in ordinary rock (including HDR) without blasting including boulders above 0.30 m upto 0.6 m dia. for canals , seating of embankment, filter drain / catch water drains etc., including dressing of bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated soft rock neatly in dump area or for formation of service road as directed etc., complete with lead upto 1 km and all lifts.	cum	180.92	
		Labour Component (including contractor's profit and Overheads)	cum		63.10
IRR-CAW-1-4	102	Excavation in ordinary rock (including HDR) without blasting including boulders above 0.3 m upto 0.60 m dia. for field channels , seating of embankment for field channels etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road as directed etc.,complete with lead upto 10 m and lift upto 3 m. (Machinery excavation and manual conveyance)	cum	121.29	
		Labour Component (including contractor's profit and Overheads)	cum		57.70

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-1-5	103	Excavation in hard rock (including F&F rock) requiring blasting including boulders above 0.6 m upto 1.2 m dia. for canals , seating of embankment, filter drain / catch water drains etc., including dressing bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated rock in dump area or for formation of service road as directed etc., complete with lead upto 1 km and all lifts.	cum	277.20	
		Labour Component (including contractor's profit and Overheads)	cum		112.90
IRR-CAW-1-6 (a)	104	Excavation in hard rock of all toughness by blasting including boulders above 1.2 m dia. for canals , seating of embankment, filter drain / catch water drains etc., including levelling the bed by removing all projections by hammering / chiselling, cost of all materials, machinery, labour, placing the excavated rock neatly in approved dump area and levelling the same as directed etc., complete with initial lead upto 1 km and all lifts. i) The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth excavation in hard rock is less than 3 m. ii) The rate includes levelling canal bed by hammering / chiselling all rock projections wherever required.	cum	687.71	
		Labour Component (including contractor's profit and Overheads)	cum		238.70
IRR-CAW-1-7 (b)	105	Excavation in hard rock of all toughness including boulders above 1.2 m dia. by approved controlled blasting methods for canals , cut-off trench of embankment, filter / catch-water drains etc., including controlling fly-rock by muffling arrangements such as placing 50 x 50 mm opening chain link mesh or waste tyres and sand bags, monitoring ground vibrations at specified locations, cost of all materials, machinery, labour, placing excavated rock neatly in approved dump area or other place as directed etc., complete with lead upto 1 km and all lifts. i) The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth excavation in hard rock is less than 3 m. ii) The rate under this item shall be adopted where the control of fly-rock and ground vibrations is required.	cum	854.00	
		Labour Component (including contractor's profit and Overheads)	cum		236.80
IRR-CAW-1-8(c)	106	Excavation in hard rock of all toughness including boulders above 1.2 m dia. for dressing canal sides neatly on either side to required profile by line drilling and smooth blasting including removing under-cuts by chiselling / hammering, placing the excavated rock neatly in dump area or other place as directed, cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts. i) For excavation of canal below free board level combination of normal controlled blasting and line drilling and smooth blasting shall be adopted to obtain neat side slopes. For the purpose of payment 1 m width of excavation on either side shall be treated as excavation by line drilling and smooth blasting and remaining portion shall be treated as excavation by normal / controlled blasting as the case may be. ii) The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth of excavation in hard rock is less than 3 m. iii) The rate includes controlling fly-rock wherever required. iv) The rate under this item shall be paid only on ascertaining that the excavated face has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval. v) In case, where the above criteria is not fulfilled payment shall be restricted to the rate provided for excavation by normal blasting or controlled blasting as the case may be.	cum	1576.57	
		Labour Component (including contractor's profit and Overheads)	cum		629.80
IRR-CAW-1-9(a)	107	Excavation in hard rock by blasting including boulders above 1.2 m dia. for canals , seating embankment etc., including levelling bed by removing all projections by hammering / chiselling, cost of all materials, machinery, labour, placing the excavated rock neatly in approved dump area and levelling the same as directed etc., complete with initial lead upto 1 km and all lifts. i) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m. ii) The rate includes levelling canal bed by hammering /chiselling all rock projections wherever required.	cum	394.42	
		Labour Component (including contractor's profit and Overheads)	cum		75.00

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-1-10(b)	108	Excavation in hard rock of all toughness including boulders above 1.2 m dia. by approved controlled blasting methods for canals, cut-off trench of embankment etc., including controlling fly-rock by muffling arrangements such as placing 50 x 50 mm opening chain link mesh or waste tyres and sand bags, monitoring ground vibrations at specified locations, cost of all materials, machinery, labour, placing excavated rock neatly in approved dump area or other place as directed etc., complete with lead upto 1 km and all lifts. i) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m. ii) The rate under this item shall be adopted where the control of fly-rock and ground vibrations is required.	cum	568.88	
		Labour Component (including contractor's profit and Overheads)	cum		85.90
IRR-CAW-1-11(c)	109	Excavation in hard rock of all toughness including boulders above 1.2 m dia. for dressing canal sides neatly on either side to required profile by line drilling and smooth blasting including removing under-cuts by chiselling / hammering, placing the excavated rock neatly in dump area or other place as directed, cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts. i) For excavation of canal below free board level combination of normal controlled blasting and line drilling and smooth blasting shall be adopted to obtain neat side slopes. For the purpose of payment 1 m width of excavation on either side shall be treated as excavation by line drilling and smooth blasting and remaining portion shall be treated as excavation by normal / controlled blasting as the case may be. ii) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m. iii) The rate includes controlling fly-rock wherever required. iv) The rate under this item shall be paid only on ascertaining that the excavated face has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval. v) In case, where the above criteria is not fulfilled payment shall be restricted to	cum	988.00	
		Labour Component (including contractor's profit and Overheads)	cum		193.00
IRR-CAW-2		EMBANKMENT WORKS USING BORROW AREA SOIL :			
IRR-CAW-2-1	110	Providing impervious hearting embankment with selected soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	264.65	
		Labour Component (including contractor's profit and Overheads)	cum		56.60
IRR-CAW-2-2	111	Providing impervious hearting embankment with selected soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	255.81	
		Labour Component (including contractor's profit and Overheads)	cum		55.60
IRR-CAW-2-3	112	Providing semi-pervious / pervious casing embankment using soil from approved borrow area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sortingout, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	264.31	
		Labour Component (including contractor's profit and Overheads)	cum		56.60
IRR-CAW-2-4	113	Providing semi-pervious / pervious casing embankment using soil from approved borrow area in layers of 25cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sortingout, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	260.15	
		Labour Component (including contractor's profit and Overheads)	cum		60.00

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-2-5	114	Providing semi-pervious / pervious casing embankment using soil from approved borrow area in layers of 25cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sortingout, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer without watering to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	240.10	
		Labour Component (including contractor's profit and Overheads)	cum		51.60
IRR-CAW-2-6	115	Providing hearting / casing embankment with homogeneous soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	227.58	
		Labour Component (including contractor's profit and Overheads)	cum		46.50
IRR-CAW-2-7	116	Providing hearting / casing embankment with homogeneous soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	219.77	
		Labour Component (including contractor's profit and Overheads)	cum		45.60
IRR-CAW-2-8	117	Providing casing embankment using homogeneous soil from approved borrow area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sortingout, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer without watering to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	205.59	
		Labour Component (including contractor's profit and Overheads)	cum		41.90
IRR-CAW-3		EMBANKMENT WORKS USING DUMP AREA SOIL :			
IRR-CAW-3-1	118	Providing impervious hearting embankment with soil from approved dump areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to achieve density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc.,complete with initial lead upto 1 km and all lifts.	cum	201.50	
		Labour Component (including contractor's profit and Overheads)	cum		43.20
IRR-CAW-3-2	119	Providing impervious hearting embankment with soil from approved dump areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to achieve density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc.,complete with initial lead upto 1 km and all lifts.	cum	194.57	
		Labour Component (including contractor's profit and Overheads)	cum		42.60
IRR-CAW-3-3	120	Providing semi-pervious / pervious casing embankment using soil from approved dump area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	195.65	
		Labour Component (including contractor's profit and Overheads)	cum		41.90

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-3-4	121	Providing semi-pervious / pervious casing embankment using soil from approved dump area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	188.51	
		Labour Component (including contractor's profit and Overheads)	cum		41.00
IRR-CAW-3-5	122	Providing semi-pervious / pervious casing embankment using soil from approved dump area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer without watering to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.	cum	176.00	
		Labour Component (including contractor's profit and Overheads)	cum		37.80
IRR-CAW-4		EMBANKMENT WORKS USING EXCAVATED SOIL :			
IRR-CAW-4-1	123	Providing impervious hearting embankment with soil collected in embankment area in heaps as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting out, spreading in layer of 25 cm before compaction, breaking clods, sectioning, watering and compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water.	cum	88.59	
		Labour Component (including contractor's profit and Overheads)	cum		17.80
IRR-CAW-4-2	124	Providing impervious hearting embankment with soil collected in embankment area in heaps as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting out, spreading in layer of 25 cm before compaction, breaking clods, sectioning, watering and compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water.	cum	82.10	
		Labour Component (including contractor's profit and Overheads)	cum		18.30
IRR-CAW-4-3	125	Providing semi-pervious / pervious casing hearting embankment using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in layers of 25 cm before compaction, breaking clods, sectioning, watering and compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water.	cum	88.59	
		Labour Component (including contractor's profit and Overheads)	cum		17.80
IRR-CAW-4-4	126	Providing semi-pervious / pervious casing embankment using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in layers of 25 cm before compaction, breaking clods, sectioning, watering and compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water.	cum	82.10	
		Labour Component (including contractor's profit and Overheads)	cum		18.30
IRR-CAW-4-5	127	Providing semi-pervious / pervious casing embankment using soil collected in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in layers of 25 cm before compaction, breaking clods, sectioning and compacting each layer without watering to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete.	cum	66.96	
		Labour Component (including contractor's profit and Overheads)	cum		13.30

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-4-6	128	Providing compacted embankment for field irrigation channels with gravely soil from approved borrow area including sorting out, spreading in layers of 15 cm thickness, breaking clods, watering, compacting, dressing sides to required slopes etc., complete with lead upto 50 m and all lifts. (manual work with water pump)	cum	521.28	
		Labour Component (including contractor's profit and Overheads)	cum		514.70
IRR-CAW-5		FOUNDATION FILLING WORKS :			
IRR-CAW-5-1	129	Providing rubble and sand filling in layers of 22.5 to 30 cm including cost of all materials, machinery, labour, watering, ramming etc., complete with initial lead upto 50 m and all lifts.	cum	928.24	
		Labour Component (including contractor's profit and Overheads)	cum		270.40
IRR-CAW-5-2	130	Providing rubble and Murum filling in layers of 22.5 to 30 cm including cost of all materials, machinery, labour, watering, ramming etc., complete with initial lead upto 50 m and all lifts.	cum	832.80	
		Labour Component (including contractor's profit and Overheads)	cum		270.40
IRR-CAW-5-3	131	Providing and laying 25 cm thick sand blanket below embankment including cost of all materials, machinery, labour, spreading to specified thickness etc., complete with initial lead upto 50 m and all lifts.	sqm	164.46	
		Labour Component (including contractor's profit and Overheads)	sqm		33.90
IRR-CAW-5-3-A (New Item 3 - 2011-12)	132	Providing and laying sand blanket below embankment including cost of all materials, machinery, labour, spreading to specified thickness etc., complete with initial lead upto 50 m and all lifts.	cum	657.83	
		Labour Component (including contractor's profit and Overheads)	cum		135.20
IRR-CAW-5-4	133	Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto 50 m and all lifts.	cum	717.27	
		Labour Component (including contractor's profit and Overheads)	cum		188.10
IRR-CAW-5-5	134	Providing and constructing longitudinal and cross graded filter drains using sand and 20 mm down graded aggregates satisfying specified filter criteria in layers as per specifications including cost of all materials, machinery, labour, laying to required slopes, compaction etc., complete with initial lead upto 50 m and all lifts.	cum	1150.54	
		Labour Component (including contractor's profit and Overheads)	cum		252.20
IRR-CAW-5-6	135	Laying Longitudinal Drains and Transverse drains of Size 600 x600 x750 mm in Bed and filling with 12 mm to 40 mm HG machine Crushed metal and sand in bed including excavation of drains and Cost of procuring of all materials	Rm	540.30	
		133	Rm		47.80
IRR-CAW-5-7	136	Laying and fixing of 100 mm Dia 300 mm long precast porous CC plugs in bed and sides using 1.181 Kgs of cement per each using 20 mm HG metal and placing in local filters of size 600x600x750 mm in size including excavation of drains and Cost of procuring of all materials	one plug	560.34	
		Labour Component (including contractor's profit and Overheads)	one plug		202.80
IRR-CAW-5-8	137	Providing and constructing 0.50 m thick vertical or inclined graded filter media consisting of 15 cm thick sand layers and 20 cm thick 20 mm down coarse aggregate layer using approved materials satisfying specified filter criteria as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., complete with initial lead upto 50 m and all lifts.	cum	1303.33	
		Labour Component (including contractor's profit and Overheads)	cum		252.20
IRR-CAW-5-9	138	Providing and constructing graded filter media below and behind rock-toe consisting of 20 cm thick sand, 15 cm thick 20 mm down and 15 cm thick 40 mm down size graded coarse aggregates satisfying filter criteria behind rock-toe and 15 cm thick sand, 20 cm thick 20 mm down coarse aggregate and 65 cm thick 40 mm down size coarse aggregate satisfying filter criteria below rock-toe as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., complete with initial lead upto 50 m and all lifts.	cum	1546.58	
		Labour Component (including contractor's profit and Overheads)	cum		235.40

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-5-10(a)	139	Providing and laying filter media consisting of 2 layers of poly-propeline nonwoven filter fabric and 200 mm thick 20 mm down graded coarse aggregate for embankment including cost of all materials, machinery, labour, forming toe drain etc., complete with lead upto 50 m for aggregate and all leads for fabric and all lifts. Using 200 gsm filter fabric.	sqm	661.81	
		Labour Component (including contractor's profit and Overheads)	sqm		56.10
IRR-CAW-5-11(b)	140	Providing and laying filter media consisting of 2 layers of poly-propeline nonwoven filter fabric and 200 mm thick 20 mm down graded coarse aggregate for embankment including cost of all materials, machinery, labour, forming toe drain etc., complete with lead upto 50 m for aggregate and all leads for fabric and all lifts. Using 250 gsm filter fabric.	sqm	697.60	
		Labour Component (including contractor's profit and Overheads)	sqm		56.10
IRR-CAW-6		ROCK FILL WORKS :			
IRR-CAW-6-1	141	Providing and constructing rockfill casing to canal embankment with graded stones and spalls from approved quarry including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing surface to required slopes etc., complete with initial lead upto 50 m and all lifts.	cum	625.91	
		Labour Component (including contractor's profit and Overheads)	cum		97.70
IRR-CAW-6-2	142	Providing and constructing rockfill casing to canal embankment with graded stones and spalls available in dump yard including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing surface to required slopes etc., complete with initial lead upto 50 m and all lifts. Stones and spalls available in dump yard will be issued at specified issue rate.	cum	397.77	
		Labour Component (including contractor's profit and Overheads)	cum		125.80
IRR-CAW-7		CANAL LINING WORKS :			
IRR-CAW-7-1	143	Providing cohesive non-swelling (CNS) soil lining to canals using soil from approved borrow area including spreading soil in layers of thickness not more than 15 cm , breaking clods, watering, compacting to density control of not less than 98 percent or as stipulated, dressing to required profile etc., complete with initial lead upto 1 km and all lifts.	cum	311.02	
		Labour Component (including contractor's profit and Overheads)	cum		116.90
IRR-CAW-7-2	144	Providing cohesive non-swelling (CNS) soil lining to canals using soil from approved borrow area including spreading soil in layers of thickness not more than 15 cm , breaking clods, watering, compacting to density control of not less than 95 percent or as stipulated, dressing to required profile etc., complete with initial lead upto 1 km and all lifts.	cum	303.51	
		Labour Component (including contractor's profit and Overheads)	cum		115.50
IRR-CAW-7-3	145	Providing cohesive non-swelling (CNS) soil lining to canal using soil collected in heaps along the edge of canal requiring CNS soil lining as part of the disposal of excavated soil from canal excavation in CNS soil reach including spreading in layers of thickness not more than 15 cm , breaking clods, watering, compacting to density control of not less than 95 percent or as stipulated, dressing to required profile etc., complete with lead upto upto 50 m and all lifts.	cum	170.90	
		Labour Component (including contractor's profit and Overheads)	cum		90.40

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-7-4	146	Providing and fixing 20 x 20 x 75 cm size top surface neatly dressed canal bed level stones including cost of all materials, labour, excavation, fixing in position to correct level etc., complete with lead upto 50 m and all lifts.	Each	154.69	
		Labour Component (including contractor's profit and Overheads)	Each		119.50
IRR-CAW-7-5	147	Providing, fabricating and placing in position reinforcement steel bars for RCC works including cleaning, straightening, cutting, bending, hooking, lapping, tying with 1.25 mm dia.soft annealed steel wire, welding wherever required including cost of all materials, machinery, labour etc., complete with initial lead upto 50 and all lifts.(1.05 tonne/tonne of steel)	kg	84.66	
		Labour Component (including contractor's profit and Overheads)	kg		13.20
IRR-CAW-7-6	148	Providing and laying 75 mm thick in-situ M-15 (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete with 20 mm down size approved, clean, hard, graded aggregates for canal lining using vibrating cylinder type mechanical paver including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position,finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete with initial lead upto 1 km and all lifts. (43 Gr Cement content: (300kg /cum) 22.5 kg / sqm for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum, equivalent concrete volume:79.2 cum including the extra quantity of concrete for curvatures and bends etc.,)	sqm	477.20	
		Labour Component (including contractor's profit and Overheads)	sqm		51.40
IRR-CAW-7-7	149	Providing and laying 80 mm thick in-situ M-15 (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete with 20 mm down size approved, clean, hard, graded aggregates for canal lining using vibrating cylinder type mechanical paver including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete with initial lead upto 1 km and all lifts. (43 Gr Cement content: (300kg /cum) 24 kg / sqm for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum, equivalent concrete volume:84.48 cum including the extra quantity of concrete for curvatures and bends etc.,)	sqm	494.98	
		Labour Component (including contractor's profit and Overheads)	sqm		51.40
IRR-CAW-7-8	150	Providing and laying 100 mm thick in situ M-15 (28 days cube compressive strength not less than 15 N /Sqmm) grade cement concrete with 20 mm down size approved, clean, hard, graded aggregates for canal lining using, vibrating, cylinder type mechanical paver including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete with initial lead upto 1 Km and all lifts. (43 Gr Cement content: (300kg /cum) 30 kg / sqm for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum, equivalent concrete volume:88 cum including the extra quantity of concrete for curvatures and bends etc.,)	sqm	598.39	
		Labour Component (including contractor's profit and Overheads)	sqm		59.60
IRR-CAW-7-9	151	Dismantling, shifting and re-erecting mechanical concrete paver and DG set with all accessories across canal CD work or other locations wherever shifting and re-erecting is necessary including aligning paver correctly for continuing canal lining work, cost of all materials, machinery, labour etc., complete with all leads and lifts. Note: Local shifting and re-erection of paver for LH and RH side lining included in concrete lining rates under items IRR-CAW-7-7 and IRR-CAW-7-8 and saperate rate for shifting shall not be allowed.	shifting	14190.35	
		Labour Component (including contractor's profit and Overheads)	shifting		11371.70

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-7-10	152	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N /sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for bed and side lining of canal(150mm thick) including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (43 Gr Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) (Only for Manually operated)	cum	5872.27	
		Labour Component (including contractor's profit and Overheads)	cum		2105.30
IRR-CAW-7-11	153	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N/sqm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregate for bed and side lining of canal(100 mm thick) including, finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead up to 50 m and all lifts (43 Gr Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)	cum	6190.78	
		Labour Component (including contractor's profit and Overheads)	cum		2167.20
IRR-CAW-7-12	154	Providing and laying 100mm thick insitu vibrated M-10 (28 days cube compressive strength-not less than 10.00 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for bed and side lining of canal lining using vibrating cylindertype mechanical paver including cost of all materials machinery labour batching mixing placing in position forming contraction joints fixing pvc joint sealing strips shifting of paver from one side of canal to other side etc. complete with all leads & lifts. (Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)	sqm	580.58	
		Labour Component (including contractor's profit and Overheads)	sqm		59.60
IRR-CAW-7-13	155	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N /sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for bed and side lining of canal including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)	cum	6064.39	
		Labour Component (including contractor's profit and Overheads)	cum		2167.20
IRR-CAW-7-14	156	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for bed and side lining(150 mm thick) of canal including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 290 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)	cum	6321.81	
		Labour Component (including contractor's profit and Overheads)	cum		2291.60
IRR-CAW-7-15	157	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for bed and side lining(of thickness 100 mm) of canal including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 300 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.45 cum)	cum	6623.49	
		Labour Component (including contractor's profit and Overheads)	cum		2419.00

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-7-16	158	Providing and laying 150mm thick insitu vibrated M-15 (28 days cube compressive strength-not less than 15.00 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for bed and side lining of canal lining using vibrating cylindertype mechanical paver including cost of all materials machinery labour batching mixing placing in position forming contraction joints fixing pvc joint sealing strips shifting of paver from one side of canal to other side etc. complete with all leads & lifts. (Cement content: 300 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.44 cum) (Paver)	sqm	768.91	
		Labour Component (including contractor's profit and Overheads)	sqm		59.60
IRR-CAW-7-17	159	Providing and fixing pre-cast RCC template walls consisting of 0.05 cum M-15 grade concrete using 20 mm down size coarse aggregates and 10 kg reinforcement steel moulded as per specifications and drawing in CM 1:4 proportion including cost of all materials, machinery, labour, formwork, fabricating and placing reinforcement steel, mixing, laying, conveying and fixing in position including necessary excavation for seating, finishing joints in CM 1:4, curing etc., complete with initial lead upto 1 km and all lifts.	Rm	1434.20	
		Labour Component (including contractor's profit and Overheads)	Rm		475.80
IRR-CAW-7-18	160	Providing and fixing 50 mm dia perforated GI pressure relief pipes 12.50 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all leads and lifts.	Each	167.21	
		Labour Component (including contractor's profit and Overheads)	Each		79.00
IRR-CAW-7-19	161	Providing and fixing 50 mm dia perforated GI pressure relief pipes 22.50 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all leads and lifts.	Each	219.65	
		Labour Component (including contractor's profit and Overheads)	Each		79.00
IRR-CAW-7-20	162	Providing and fixing 50 mm dia perforated GI pressure relief pipes 30 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all leads and lifts.	Each	252.57	
		Labour Component (including contractor's profit and Overheads)	Each		79.00
IRR-CAW-7-21	163	Providing and fixing 50 mm dia perforated GI pressure relief pipes 45 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all leads and lifts.	Each	313.75	
		Labour Component (including contractor's profit and Overheads)	Each		79.00
IRR-CAW-7-22	164	Providing and fixing 50 mm dia perforated GI pressure relief pipes 75 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all leads and lifts.	Each	431.45	
		Labour Component (including contractor's profit and Overheads)	Each		79.00
IRR-CAW-7-23	165	Providing and fixing 100 mm dia perforated PVC pipes 40 cm long for Weep holes including cost of all materials, labour, drilling 8 mm dia holes etc. complete with all leads and lifts.	Each	224.67	
		Labour Component (including contractor's profit and Overheads)	Each		39.50
IRR-CAW-7-24	166	Drilling 32 mm dia pressure relief hole below pressure relief pipe for bed and side lining of canal laid on rock including cost of all materials, machinery, labour etc., complete with all leads and lifts.	Each	405.25	
		Labour Component (including contractor's profit and Overheads)	Each		156.20
IRR-CAW-7-25	167	Providing and forming 35 x 35 x 40 cm deep filter drain consisting of 75 mm thick 10 mm down coarse aggregate around pressure relief pipe and 75 mm thick sand around coarse aggregate filter including cost of all materials, labour, excavation of pit etc., complete with lead upto 50 m and all lifts.	Each	56.80	
		Labour Component (including contractor's profit and Overheads)	Each		14.10

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-7-26	168	Providing and fixing 25 to 40 mm thick Shahabad / Talikota / other similar stone slabs with pointing and finishing joints neatly in CM 1:3 proportion for canal / field channel lining including cutting slabs to required size, mixing mortar, finishing joints neatly, curing etc., complete with lead upto 50 m and all lifts.	sqm	494.57	
		Labour Component (including contractor's profit and Overheads)	sqm		121.70
IRR-CAW-7-27	169	Fixing PCC slabs of various sizes in CM 1 : 3 proportion to the side slopes of canal including preparing bed, flush pointing joints in CM 1 : 3 propn, cost of all materials (excluding PCC slabs), labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts.	sqm	132.84	
		Labour Component (including contractor's profit and Overheads)	sqm		114.00
IRR-CAW-7-28	170	Fixing PCC lug slabs of various sizes in CM 1 : 3 proportion for supporting PCC slab lining including necessary excavation, refilling, flush pointing joints in CM 1 : 3 propn, cost of all materials (excluding PCC lug slabs), labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts.	Rm	81.46	
		Labour Component (including contractor's profit and Overheads)	Rm		76.00
IRR-CAW-7-29	171	Fixing 30 cm height pre-cast drops for field channels as directed including excavation, etc., complete with all leads and lifts.	Each	326.24	
		Labour Component (including contractor's profit and Overheads)	Each		326.20
IRR-CAW-7-30	172	Providing and fixing LDPE sheet for bed and sides of canal including cost of all materials, labour, laying, joining etc., complete with all leads and lifts. Using 500 micron thick LDPE sheet.	sqm	149.48	
		Labour Component (including contractor's profit and Overheads)	sqm		14.90
		If the surface on which the LDPE sheet is to be laid is too rough and undulating provide 75 mm thick sand backing to LDPE sheet. For providing 75 mm thick Sand for backing add	sqm	55.42	
		Labour Component (including contractor's profit and Overheads)	sqm		16.20
IRR-CAW-7-31	173	Providing and fixing LDPE sheet for bed and sides of canal including cost of all materials, labour, laying, joining etc., complete with all leads and lifts. Using 750 micron thick LDPE sheet.	sqm	210.83	
		Labour Component (including contractor's profit and Overheads)	sqm		20.00
IRR-CAW-7-32	174	Providing and fixing LDPE sheet for bed and sides of canal including cost of all materials, labour, laying, joining etc., complete with all leads and lifts. Using 1000 micron thick LDPE sheet.	sqm	291.27	
		Labour Component (including contractor's profit and Overheads)	sqm		26.70
IRR-CAW-7-33	175	Providing and fixing 12 mm thick 380 mm depth tarfelt expansion joint filler boards for stone masonry lining of canal including cost of all materials, labour etc., complete with all leads and lifts.	Rm	205.10	
		Labour Component (including contractor's profit and Overheads)	Rm		14.10
IRR-CAW-7-34	176	Providing and fixing 20 mm thick 100 mm depth tarfelt expansion joint filler boards for cement concrete lining of canal including cost of all materials, labour etc., complete with all leads and lifts.	Rm	90.20	
		Labour Component (including contractor's profit and Overheads)	Rm		14.10
IRR-CAW-7-35	177	Providing and fixing 20 mm thick 150 mm depth tarfelt expansion joint filler boards for cement concrete lining of canal including cost of all materials, labour etc., complete with all leads and lifts.	Rm	130.50	
		Labour Component (including contractor's profit and Overheads)	Rm		14.10
IRR-CAW-7-36	178	Providing and forming 35 mm wide and 10 mm thick construction / contraction joints for concrete lining by mastic filler including cost of all materials, labour etc., complete with all leads and lifts.	Rm	30.21	
		Labour Component (including contractor's profit and Overheads)	Rm		10.50
IRR-CAW-7-37	179	Manufacturing 550 x 550 x 55 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N /sqmm) cement concrete using 20 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.80 cum, Blending Ratio of CA : 65:35, FA : 0.45cum)	Each	116.55	
		Labour Component (including contractor's profit and Overheads)	Each		44.50

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-7-38	180	Manufacturing 550 x 300 x 55 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 20 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.80 cum, Blending Ratio of CA : 65:35, FA : 0.45cum)	Each	88.22	
		Labour Component (including contractor's profit and Overheads)	Each		44.50
IRR-CAW-7-39	181	Manufacturing 450 x 300 x 30 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.68 cum, FA : 0.43cum)	Each	46.90	
		Labour Component (including contractor's profit and Overheads)	Each		29.20
IRR-CAW-7-40	182	Manufacturing 450 x 150 x 30 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement),CA : 0.68 cum, FA : 0.43cum)	Each	39.04	
		Labour Component (including contractor's profit and Overheads)	Each		29.20
IRR-CAW-7-41	183	Manufacturing 600 x 300 x 100mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N/sqmm) cement concrete using 20 mm down grades coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.80 cum, FA : 0.45cum, Blending Ratio of CA--65:35)	Each	102.32	
		Labour Component (including contractor's profit and Overheads)	Each		28.60
IRR-CAW-7-42	184	Manufacturing 400 x 400 x 30 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.68 cum, FA : 0.43cum)	Each	49.06	
		Labour Component (including contractor's profit and Overheads)	Each		29.20
IRR-CAW-7-43	185	Manufacturing 400 x 150 x 30 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N/sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.68 cum, FA : 0.43cum)	Each	38.47	
		Labour Component (including contractor's profit and Overheads)	Each		29.20
IRR-CAW-7-44	186	Providing and laying uncoursed rubble stone masonry in CM 1 : 5 proportion for canal side lining using stones and chips from approved quarry including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Thickness of the masonry assumed: 0.3 m, rubble stones : 0.96 cum, Stone Chips : 0.15cum,Through Stones 20 x 20 x 30cm : 1/sqm)	cum	2659.55	
		Labour Component (including contractor's profit and Overheads)	cum		1095.10
IRR-CAW-7-45	187	Providing and laying uncoursed rubble stone masonry in CM 1:5 proportion for canal side lining using stones from approved quarry including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete with initial lead upto 50m and all lifts.(with no pin headers)(Thickness of the Masonry assumed:0.3 m, rubble stones : 1.1 cum)	cum	4935.20	
		Labour Component (including contractor's profit and Overheads)	cum		3604.90
IRR-CAW-7-46	188	Providing and laying uncoursed rubble stone masonry in CM 1 : 5 proportion for canal side lining using stones and chips from canal excavation including cost of all materials, machinery, labour, forming weep holes at specified interval, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.96 cum, Stone Chips : 0.15cum, Through Stones 20 x 20 x 30cm : 1/sqm)	cum	2548.51	
		Labour Component (including contractor's profit and Overheads)	cum		1235.40

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-7-47	189	Providing and laying uncoursed rubble stone masonry in CM 1:5 proportion for canal side lining using stones from canal excavation including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete with initial lead upto 50m and all lifts.(with no pin headers)(rubble stones : 1.1cum, cement : 98kg, sand 0.34 cum)	cum	4696.88	
		Labour Component (including contractor's profit and Overheads)	cum		3604.90
IRR-CAW-8		ROCK PITCHING			
IRR-CAW-8-1	190	Providing and constructing 25 cm thick dry rubble stone pitching with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.23 cum/sqm, Stone Chips : 0.0375cum/sqm, Pin Headers 30cm : 2/sqm)	sqm	274.69	
		Labour Component (including contractor's profit and Overheads)	sqm		85.80
		If 15 cm thick murum bed is to be provided below pitching add	sqm	78.17	
		Labour Component (including contractor's profit and Overheads)	sqm		27.00
IRR-CAW-8-1-A (New Item4 - 2011-12)	191	Providing and constructing 22.5 cm thick dry rubble stone pitching with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.207 cum/sqm, Stone Chips : 0.3375cum/sqm, Pin Headers 30cm : 2/sqm) (For Maintenance Works)	sqm	262.39	
		Labour Component (including contractor's profit and Overheads)	sqm		85.80
IRR-CAW-8-2	192	Providing and constructing 25 cm thick dry rubble stone pitching including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(with no pin headers)(rubble stones : 0.33 cum/sqm)	sqm	330.72	
		Labour Component (including contractor's profit and Overheads)	sqm		207.30
IRR-CAW-8-2 - A (New Item5 - 2011-12)	193	Providing and constructing 225 mmm thick dry rubble stone pitching including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(with no pin headers)(rubble stones : 0.2475 cum/sqm) (For Maintenance Works)	sqm	258.28	
		Labour Component (including contractor's profit and Overheads)	sqm		186.60
IRR-CAW-8-3	194	Providing and constructing 30 cm thick dry rubble stone pitching with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.275 cum/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)	sqm	298.86	
		Labour Component (including contractor's profit and Overheads)	sqm		85.80
IRR-CAW-8-4	195	Providing and constructing 30 cm thick dry rubble stone pitching including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(with no pin headers)(rubble stones : 0.33 cum/sqm)	sqm	396.86	
		Labour Component (including contractor's profit and Overheads)	sqm		248.80
IRR-CAW-8-5	196	Providing and constructing 45 cm thick dry rubble stone pitching with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.40 cum/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm)	sqm	449.41	
		Labour Component (including contractor's profit and Overheads)	sqm		120.50
IRR-CAW-8-6	197	Providing and constructing 45 cm thick dry rubble stone pitching including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(with no pin headers)(rubble stones : 0.495 cum/sqm)	sqm	595.29	
		Labour Component (including contractor's profit and Overheads)	sqm		373.10
IRR-CAW-8-7	198	Providing and constructing 30 cm thick rubble stone pitching set in CM 1: 5 proportion with pin headers at 2 per sqm in including cost of all materials, labour, packing chips and mortar, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.275 cum/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)	sqm	593.46	
		Labour Component (including contractor's profit and Overheads)	sqm		146.30

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CAW-8-8	199	Providing and Constructing 30 cm thick rubble stone pitching set in CM 1:5 Proportion including cost of all materials,labour, packing chips and mortar ,finishing etc., complete(rubble stones : 0.33 cum/sqm)	sqm	428.31	
		Labour Component (including contractor's profit and Overheads)	sqm		32.50
IRR-CAW-8-9	200	Providing and constructing 30 cm thick dry khandki stone pitching using 20 to 25 cm size khandki stones with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(Khandki stones 20- 25 cm height : 1200 Nos/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)	sqm	475.39	
		Labour Component (including contractor's profit and Overheads)	sqm		85.80
IRR-CAW-8-10	201	Providing and constructing 45 cm thick dry khandki stone pitching using 25 to 30 cm size khandki stones with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(Khandki stones 25- 30 cm height : 1200 Nos/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm)	sqm	460.66	
		Labour Component (including contractor's profit and Overheads)	sqm		120.50
IRR-CAW-8-11	202	Providing and constructing 30 cm thick khandki stone pitching using 20 to 25 cm size khandki stones with pin headers at 2 per sqm set in CM 1 : 5 proportion with pointing joints in CM 1:3 proportion including cost of all materials, labour, packing chips and mortar, finishing, curing etc. complete with initial lead upto 50 m and all lifts.(Khandki stones 20- 25 cm height : 1200 Nos/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)	sqm	751.66	
		Labour Component (including contractor's profit and Overheads)	sqm		139.60
IRR-CAW-8-12	203	Providing and constructing 45 cm thick khandki stone pitching using 25 to 30 cm stones with pin headers at 2 per sqm set in CM 1 : 5 proportion with pointing joints in CM 1 : 3 proportion including cost of all materials, labour, packing chips and mortar, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Khandki stones 25- 30 cm height : 730 Nos/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm)	sqm	848.45	
		Labour Component (including contractor's profit and Overheads)	sqm		191.90
IRR-CAW-8-13	204	Providing 10 cm thick approved type grass turfing to the side slopes of canal including cost of all materials, labour, watering for minimum 15 days etc., complete with lead 50 m and all lifts.(FA : 2 cum/sqm)	sqm	151.65	
		Labour Component (including contractor's profit and Overheads)	sqm		111.70
IRR-CAW-8-14	205	Providing 10 cm thick approved type grass turfing to the side slopes of canal including cost of all materials, labour, watering for minimum 15 days etc., complete with lead 50 m and all lifts. with no sand	sqm	92.99	
		Labour Component (including contractor's profit and Overheads)	sqm		63.50
Chapter IV					
IRR-CCDW		CANAL CROSS DRAINAGE WORKS			
IRR-CCDW-1		EXCAVATION & FOUNDATION TREATMENT WORKS : (manual means of excavation and conveyance)			
IRR-CCDW-1-1	206	Excavation in all kinds of soil including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.	cum	427.62	
		Labour Component (including contractor's profit and Overheads)	cum		427.60
IRR-CCDW-1-2	207	Excavation for Structures- Mechanical Means (Data adopted from MORTH) Earth work in excavation in all kinds of soils of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material. (depth upto 3 meters)	cum	125.79	
		Labour Component (including contractor's profit and Overheads)	cum		34.20

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CCDW-1-3	208	(manual means of excavation and conveyance) Excavation in ordinary rock (including HDR) without blasting including boulders above 0.3 m upto 0.60 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.	cum	609.40	
		Labour Component (including contractor's profit and Overheads)	cum		609.40
IRR-CCDW-1-4	209	(Data adopted from MORTH) (manual means of excavation and conveyance) Excavation in ordinary rock (including HDR) without blasting for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.	cum	159.82	
		Labour Component (including contractor's profit and Overheads)	cum		37.70
IRR-CCDW-1-5	210	(manual means of excavation after blasting and conveyance) Excavation in hard rock requiring blasting including boulders above 0.6 m upto 1.2 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.	cum	579.20	
		Labour Component (including contractor's profit and Overheads)	cum		473.90
IRR-CCDW-1-6	211	(manual means of excavation after blasting and conveyance) Excavation in hard rock of all toughness by blasting including boulders above 1.2 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated rock neatly in specified dump area or stack yard as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.	cum	848.57	
		Labour Component (including contractor's profit and Overheads)	cum		581.90
IRR-CCDW-1-7	212	(manual means of excavation after controlled blasting and conveyance) Hard Rock (blasting prohibited) (Data adopted from MORTH) Excavation in hard rock with blasting (blasting prohibited)prohibited for foundations of canal cross drainage and other appurtenant structures and placing the excavated rock neatly in or stack yard as directed etc., complete with specified dump area initial lead upto 50 m and initial lift upto 3 m.	cum	1566.64	
		Labour Component (including contractor's profit and Overheads)	cum		582.70
IRR-CCDW-1-8	213	Providing and fixing 25 mm dia 2.50 m long cold twisted deformed steel anchor rods with 1.25 m length driven into 32 mm dia hole drilled in bed rock and remaining length embedded in concrete / masonry including cost of all materials, machinery, labour, drilling and cleaning hole, driving anchor rod, grouting hole with thick cement slurry etc., complete with initial lead upto 50 m and all lifts.	Each	1290.68	
		Labour Component (including contractor's profit and Overheads)	Each		352.40
IRR-CCDW-2		STEEL AND CEMENT CONCRETE WORKS :			
IRR-CCDW-2-1	214	Providing, fabricating and placing in position reinforcement steel bars for RCC works including cleaning, straightening, cutting, bending, hooking, lapping, welding wherever required,tying with 1.25 mm dia soft annealed steel wire, including cost of all materials, machinery, labour etc., complete with initial lead upto 50 and all lifts.	kg	85.22	
		Labour Component (including contractor's profit and Overheads)	kg		14.10
IRR-CCDW-2-2	215	Providing, fabricating and fixing in position structural steel cutting edge consisting of 100 x 100 x 10 mm angle and 250 x 12 mm plate for sinking 4.50 m outer diameter foundation wells foundation wells including cost of all materials, machinery, labour, bending, welding, providing anchors etc., complete with initial lead upto 50 m and all lifts.	kg	108.50	
		Labour Component (including contractor's profit and Overheads)	kg		16.50

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CCDW-2-3	216	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)	cum	5839.00	
		Labour Component (including contractor's profit and Overheads)	cum		2183.80
IRR-CCDW-2-4	217	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum)	cum	5860.76	
		Labour Component (including contractor's profit and Overheads)	cum		2273.90
IRR-CCDW-2-5	218	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)	cum	5543.76	
		Labour Component (including contractor's profit and Overheads)	cum		2104.50
IRR-CCDW-2-6	219	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum)	cum	5690.19	
		Labour Component (including contractor's profit and Overheads)	cum		2259.30
IRR-CCDW-2-7	220	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 310 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)	cum	6221.85	
		Labour Component (including contractor's profit and Overheads)	cum		2294.80
IRR-CCDW-2-8	221	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for sub-structure / super- structure works including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)	cum	6783.37	
		Labour Component (including contractor's profit and Overheads)	cum		2287.40
IRR-CCDW-2-9	222	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for sub-structure / super- structure works including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)	cum	6815.32	
		Labour Component (including contractor's profit and Overheads)	cum		2428.30

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CCDW-2-10	223	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for sub-structure / super- structure works including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 280 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)	cum	6566.19	
		Labour Component (including contractor's profit and Overheads)	cum		2432.60
IRR-CCDW-2-11	224	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for sub-structure / super- structure works including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)	cum	6064.56	
		Labour Component (including contractor's profit and Overheads)	cum		2262.20
IRR-CCDW-2-12	225	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for well kerb including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 350 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum	cum	8654.36	
		Labour Component (including contractor's profit and Overheads)	cum		2930.70
IRR-CCDW-2-13	226	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for well steining including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	7796.60	
		Labour Component (including contractor's profit and Overheads)	cum		2680.40
IRR-CCDW-2-14	227	Providing and laying insitu M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for well bottom plug by tremie or skip box method including cost of all materials, complete with initial lead upto 50 m and all lifts. (Cement content: 350 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)	cum	5639.90	
		Labour Component (including contractor's profit and Overheads)	cum		2133.80
IRR-CCDW-2-15	228	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for well top plug including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 280 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) If water is to be brought from other place add only lead charges @ 500 ltrs / cum	cum	5351.20	
		Labour Component (including contractor's profit and Overheads)	cum		2079.50

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CCDW-2-16	229	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for well cap including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	5875.41	
		Labour Component (including contractor's profit and Overheads)	cum		2115.40
IRR-CCDW-2-17	230	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates for piers and abutments including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	7312.97	
		Labour Component (including contractor's profit and Overheads)	cum		2806.10
IRR-CCDW-2-18	231	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates for piers and abutments including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	7141.96	
		Labour Component (including contractor's profit and Overheads)	cum		2790.30
IRR-CCDW-2-19	232	Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for piers and abutments including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	6949.59	
		Labour Component (including contractor's profit and Overheads)	cum		2581.00
IRR-CCDW-2-20	233	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for cantiliver / counterfort retaining walls including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	7665.05	
		Labour Component (including contractor's profit and Overheads)	cum		2671.20

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CCDW-2-21	234	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates with placing and sinking plums of size 150 to 80 mm upto 15 percent for gravity type retaining walls / piers / abutments etc. , including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.765cum, Blending Ratio of CA--50:30:20, FA : 0.34 cum, plums of size 150 to 80 mm : 0.25cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	6878.06	
		Labour Component (including contractor's profit and Overheads)	cum		2504.10
IRR-CCDW-2-22	235	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard,graded aggregates for cast in-situ pipes including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	6447.30	
		Labour Component (including contractor's profit and Overheads)	cum		2363.80
IRR-CCDW-2-23	236	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates for cast in-situ pipes including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	6461.27	
		Labour Component (including contractor's profit and Overheads)	cum		2452.50
IRR-CCDW-2-24	237	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for deck slab & kerb including cost of all materials,machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	10886.24	
		Labour Component (including contractor's profit and Overheads)	cum		3502.50
IRR-CCDW-2-25	238	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for columns and beams including cost of all materials, labour, machinery, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	9379.95	
		Labour Component (including contractor's profit and Overheads)	cum		3200.00

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CCDW-2-26	239	Providing and laying insitu M-20 (28 days cube compressive strength not less than 20 N / sqmm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for wearing coat including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position in alternate panels, levelling, compacting, finishing, curing, packing joints with asphalt mortar etc., complete with initial lead upto 50 m and all lifts. (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	5756.22	
		Labour Component (including contractor's profit and Overheads)	cum		2169.00
IRR-CCDW-2-27	240	Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for troughs including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position,levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum.	cum	8454.29	
		Labour Component (including contractor's profit and Overheads)	cum		2972.90
IRR-CCDW-3		FOUNDATION WELL SINKING WORKS :			
IRR-CCDW-3-1	241	Sinking RCC wells vertically for foundation of piers and abutments in all kinds of soil, sand and soft rock by approved well sinking method including cost of all materials, machinery, labour, kent - ledge arrangements, disposal of excavated material as disposal of excavated material as directed etc., complete with lead upto 50 m for disposal of excavated material.(diameter of well 6.00m) (Data adopted from MORTH)	*Rm	5576.70	
		Labour Component (including contractor's profit and Overheads)	*Rm		2868.60
		for 3 to 10 meters for each running meter	*Rm	7803.56	
		Labour Component (including contractor's profit and Overheads)	*Rm		3741.20
IRR-CCDW-3-2	242	Filling foundation wells with sand in layers of 25 to 30 cm and compacting by watering, ramming as directed including cost of all materials, machinery, labour etc., complete with initial lead upto 50 m and all lifts.	cum	743.70	
		Labour Component (including contractor's profit and Overheads)	cum		195.00
IRR-CCDW-4		MASONRY WORKS :			
IRR-CCDW-4-1	243	Providing and constructing un-coursed rubble stone masonry with approved stones in CM 1 : 4 proportion for sub-structure portions of return walls / abutments etc. , including cost of all materials, machinery, labour, scaffolding, cleaning, packing cement mortar, wedging stone chips, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 143 kg / cum of masonry, rubble stones : 0.85cum, FA : 0.40 cum,Stone Chips : 0.15 cum)	cum	2963.22	
		Labour Component (including contractor's profit and Overheads)	cum		1369.20
IRR-CCDW-4-2	244	Providing and constructing un-coursed rubble stone masonry with approved stones in CM 1 : 4 proportion for super-structure portions of return walls / abutments etc. , including cost of all materials, machinery, labour, scaffolding, cleaning, packing cement mortar, wedging stone chips, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 143 kg / cum of masonry, rubble stones : 0.85cum, FA : 0.40 cum,Stone Chips : 0.15 cum)	cum	3034.38	
		Labour Component (including contractor's profit and Overheads)	cum		1403.40
IRR-CCDW-4-3	245	Providing and constructing coursed rubble masonry second sort in CM 1:4 proportion with stones from approved source including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, finishing, curing etc., complete with initial lead upto 50 m and initial lift upto 3 m.(Cement content: 133 kg / cum of masonry, rubble stones : 0.45cum, FA : 0.35 cum,Stone Chips : 0.15 cum, Khandki stones 25 x 25 x 30 cm : 180 Nos, Header stones 25 x 25x 45 cm : 60 Nos)	cum	3744.64	
		Labour Component (including contractor's profit and Overheads)	cum		1557.70

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CCDW-4-4	246	Providing and constructing coursed rubble masonry first sort in CM 1:4 proportion with stones from approved source including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, finishing, curing etc., complete with initial lead upto 50 m and initial lift upto 3 m.(Cement content: 133 kg / cum of masonry, rubble stones : 0.45cum, FA : 0.35 cum,Stone Chips : 0.15 cum, Khandki stones 25 x 25 x 30 cm : 180 Nos, Header stones 25 x 25x 45 cm : 60 Nos)	cum	3968.24	
		Labour Component (including contractor's profit and Overheads)	cum		1781.30
IRR-CCDW-4-5	247	Providing cement mortar pointing to coursed rubble face stone masonry in CM 1 : 2 proportion by volume including raking and cleaning joints for 50 mm depth, pressing cement mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 50 m and all lifts.	sqm	185.84	
	246		sqm		157.10
IRR-CCDW-4-6	248	Providing cement mortar pointing to coursed rubble face stone masonry in CM 1 : 3 proportion by volume including raking and cleaning joints for 50 mm depth, pressing cement mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 50 m and all lifts.	sqm	179.26	
		Labour Component (including contractor's profit and Overheads)	sqm		157.10
IRR-CCDW-4-7	249	Providing 12 mm thick plastering in cement mortar 1:3 proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., complete with initial lead upto 50 m and all lifts.	sqm	266.78	
		Labour Component (including contractor's profit and Overheads)	sqm		224.70
IRR-CCDW-4-8	250	Providing 12 mm thick plastering in cement mortar 1:4 proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., complete with initial lead upto 50 m and all lifts.	sqm	259.06	
		Labour Component (including contractor's profit and Overheads)	sqm		224.70
IRR-CCDW-4-9	251	Providing 20 mm thick plastering in cement mortar 1:3 proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., complete with initial lead upto 50 m and all lifts.	sqm	369.06	
		Labour Component (including contractor's profit and Overheads)	sqm		298.80
IRR-CCDW-4-10	252	Providing 20 mm thick plastering in cement mortar 1:4 proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., complete with initial lead upto 50 m and all lifts.	sqm	356.18	
		Labour Component (including contractor's profit and Overheads)	sqm		298.80
IRR-CCDW-5		COPING & RAILING WORKS :			
IRR-CCDW-5-1	253	Providing and fixing 10 cm thick roughly dressed burnt stone slabs for coping set in CM 1: 6 proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm, Burnt stone slab 10 cm thick 1.05 sqm/ sqm)	sqm	824.44	
		Labour Component (including contractor's profit and Overheads)	sqm		324.70
IRR-CCDW-5-2	254	Providing and fixing 10 cm thick one line dressed burnt stone slabs for coping set in CM 1: 6 proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm, Burnt stone slab 10 cm thick 1.05 sqm/ sqm)	sqm	1069.84	
		Labour Component (including contractor's profit and Overheads)	sqm		570.10
IRR-CCDW-5-3	255	Providing and fixing 10 cm thick two line dressed burnt stone slabs for coping set in CM 1: 6 proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm, Burnt stone slab 10 cm thick 1.05 sqm/ sqm)	sqm	1387.97	
		Labour Component (including contractor's profit and Overheads)	sqm		888.20

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CCDW-5-4	256	Providing and laying insitu M-15 (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete using 20 mm down size approved clean, hard, graded aggregates for coping slab including cost of all materials, machinery, labour, formwork, cleaning surface, batching, mixing, placing in position, levelling, compacting, finishing, curing etc., complete with initial lead upto 50 m and initial lift upto 3 m. (Cement content: 300 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)	cum	8171.08	
		Labour Component (including contractor's profit and Overheads)	cum		2827.20
IRR-CCDW-5-5	257	Providing and constructing protective railing consisting of in-situ railing posts of size 15 x 15 cm at bottom, 10 x 10 cm at top and 75 cm height at 2 m centre to centre in M-20 grade concrete using 20 mm down size graded aggregates and with each post reinforced by 4 Nos. of 8 mm dia main bars embedded in kerb concrete for a depth of 40 cm and 5 Nos. of 6 mm dia. stirrups including fixing 3 rows of 40 mm dia. GI pipes with one coat of red oxide primer and two coats of synthetic enamel paint, cost of all materials, machinery, labour, formwork, finishing, curing etc., complete with lead upto 50 m and all lifts.	Rm	1377.76	
		Labour Component (including contractor's profit and Overheads)	Rm		306.80
IRR-CCDW-6		HUME PIPE LAYING & JOINTING WORKS :			
IRR-CCDW-6-1	258	Laying and jointing 300 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 9.9 kg / joint, FA : 0.01cum/joint, Hemp Yarn : 0.091kg/joint)	Joint	499.57	
		Labour Component (including contractor's profit and Overheads)	Joint		436.30
IRR-CCDW-6-2	259	Laying and jointing 450 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 17.4 kg / joint, FA : 0.022cum/joint, Hemp Yarn : 0.127kg/joint)	Joint	548.44	
		Labour Component (including contractor's profit and Overheads)	Joint		436.30
IRR-CCDW-6-3	260	Laying and jointing 600 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 24.8 kg / joint, FA : 0.025cum/joint, Hemp Yarn : 0.22kg/joint)	Joint	698.07	
		Labour Component (including contractor's profit and Overheads)	Joint		540.20
IRR-CCDW-6-4	261	Laying and jointing 700 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 32.1 kg / joint, FA : 0.031cum/joint, Hemp Yarn : 0.25kg/joint)	Joint	740.52	
		Labour Component (including contractor's profit and Overheads)	Joint		540.20
IRR-CCDW-6-5	262	Laying and jointing 800 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 39.6 kg / joint, FA : 0.039cum/joint, Hemp Yarn : 0.31kg/joint)	Joint	892.03	
		Labour Component (including contractor's profit and Overheads)	Joint		644.20
IRR-CCDW-6-6	263	Laying and jointing 900 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 44.6 kg / joint, FA : 0.045cum/joint, Hemp Yarn : 0.34kg/joint)	Joint	923.45	
		Labour Component (including contractor's profit and Overheads)	Joint		644.20
IRR-CCDW-6-7	264	Laying and jointing 1000 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 49.5 kg / joint, FA : 0.05cum/joint, Hemp Yarn : 0.377kg/joint)	Joint	1021.75	
		Labour Component (including contractor's profit and Overheads)	Joint		711.80

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-CCDW-6-8	265	Laying and jointing 1100 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 56.9 kg / joint, FA : 0.058cum/joint, Hemp Yarn : 0.415kg/joint)	Joint	1067.00	
		Labour Component (including contractor's profit and Overheads)	Joint		711.80
IRR-CCDW-6-9	266	Laying and jointing 1200 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 66.8 kg / joint, FA : 0.069cum/joint, Hemp Yarn : 0.453kg/joint)	Joint	1267.03	
		Labour Component (including contractor's profit and Overheads)	Joint		852.10
IRR-CCDW-7		BACK FILLING & OTHER WORKS :			
IRR-CCDW-7-1	267	Providing rubble / boulder and sand filling behind abutment and return walls in layers including cost of all materials, machinery, labour, watering, ramming etc., complete with initial lead upto 50 m and initial lift upto 3 m.	cum	1044.97	
		Labour Component (including contractor's profit and Overheads)	cum		387.20
IRR-CCDW-7-2	268	Providing and filling murrum / gravely soil (CNS soil) for foundation or around pipes including breaking clods, spreading in layers of 10 to 15 cm, watering, compaction by earth masters to achieve density control of not less than 95 percent etc., complete with lead upto 50 m and all lifts.	cum	830.81	
		Labour Component (including contractor's profit and Overheads)	cum		490.00
IRR-CCDW-7-3	269	Providing and filling murum / gravely soil (CNS soil) for foundation or above pipes including breaking clods, spreading in layers of 10 to 15 cm, watering, compaction by power roller to achieve density control of not less than 98 percent etc., complete with lead upto 50 m and all lifts.	cum	560.30	
		Labour Component (including contractor's profit and Overheads)	cum		192.40
IRR-CCDW-7-4	270	Providing and fixing one line dressed 111x35x25 cm thick IRC standard kilometre stone in cement concrete M-10 grade with 40 mm down size aggregates including excavating pit of size 70x45x40 cm, embedding the stone by 30 cm in concrete, providing 2 coats synthetic enamel paint of approved quality and colour to exposed surfaces and lettering as directed, cost of all materials, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts.	Each	1939.75	
		Labour Component (including contractor's profit and Overheads)	Each		796.80
IRR-CCDW-7-5	271	Providing and fixing one line dressed 65x15x10 cm thick IRC standard hectometre stone in cement concrete M-10 grade with 40 mm down size aggregates including excavating pit of size 50x45x40 cm, embedding the stone by 30 cm in concrete, providing 2 coats synthetic enamel paint of approved quality and colour to exposed surfaces and lettering as directed, cost of all materials, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts.	Each	1447.94	
		Labour Component (including contractor's profit and Overheads)	Each		683.80
Chapter V					
IRR-GAW		GATES / HOISTS AND ALLIED WORKS			
IRR-GAW-1-1	272	<u>SPILLWAY RADIAL GATES</u> E.M Parts and anchorages fabrication, supply, erection, testing and commissioning of embedded parts for radial gate consists of sill beam, wall plates, anchor girders , yoke girders, tie flats, trunnion supports etc., including cost of all materials, machinery, labour, welding, finishing, with leads and lifts & all accessories (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per scedule of rates under itemsinthis chapter and add as applicable separately)	tonne	216926.73	
		Labour Component (including contractor's profit and Overheads)	tonne		73896.80

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-GAW-1-2	273	<u>RADIAL GATES</u> fabrication, supply, erection, testing and commissioning of radial gate consisting of skin plate, stiffeners, horizontal girders, radial arms, trunnion assemblies, tie beam, pulley supports, bracings, rubber seals, clamps etc., with all accessories for spillway/canals including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne	195771.31	
		Labour Component (including contractor's profit and Overheads)	tonne		56761.50
IRR-GAW-1-3	274	<u>RADIAL GATES-ROPE DRUM HOISTS WITH HOIST BRIDGES</u> fabrication, supply, erection, testing and commissioning of electrically operated rope drum hoist of adequate capacity consisting of base frames, rope drums, connecting shaft, gear system, brake system, electric motor, wire ropes, gate position indicator, manual operation arrangement etc., with all accessories for spillway radial gate including cost of all materials, machinery, labour, greasing, providing hand railing and approach staircase with gate to hoist platform, complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne capacity	50968.57	
		Labour Component (including contractor's profit and Overheads)	tonne capacity		4536.00
IRR-GAW-1-4	275	<u>RADIAL GATES</u> Walk way (cat walk) Design, fabrication, supply, erection and commissioning of 1 metre wide walkway connecting spillway piers / abutments at trunnion platform level including cost of all materials, machinery, labour, cutting, etc., complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	Rm	149047.86	
		Labour Component (including contractor's profit and Overheads)	Rm		54432.90
IRR-GAW-2-1	276	<u>VERTICAL LIFT GATES-EM PARTS</u> Design, fabrication, supply, erection and commissioning of embedded parts consisting of sill beam, slide tracks, seal seats, guide rails, dogging sets for storage of stoplog elements etc., with all accessories for spillway stop log gates and other vertical lift elements including cost of all materials, machinery, labour, etc., complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne	239363.56	
		Labour Component (including contractor's profit and Overheads)	tonne		88599.70
IRR-GAW-2-2	277	<u>vertical lift gates and stop log gate elements (SLIDING GATES)</u> Design, fabrication, supply, erection, testing and commissioning of vertical lift gates and stoplog gate elements , consisting of skin plate, horizontal and vertical girders, stiffeners, lifting pins, bronze padded slide blocks/bearings, guide shoes, rubber seals, clamps etc., with all accessories including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) ²	tonne	204613.95	
		Labour Component (including contractor's profit and Overheads)	tonne		64985.40
IRR-GAW-2-3	278	<u>STOP LOGS-automatic lifting beam</u> fabrication, supply, erection, testing and commissioning of automatic lifting beam with all accessories for handling, lowering and lifting of spillway stop log gate elements including cost of all materials, machinery, labour, cutting, aligning, welding, finishing, etc., complete as per specifications and drawings with all leads and lifts. (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne	160844.66	
		Labour Component (including contractor's profit and Overheads)	tonne		33049.40

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-GAW-2-4	279	<u>MOVING GANTRY CRANE-CLASS II</u> fabrication, supply, erection, testing and commissioning of adequate capacity Class- II type moving gantry crane consisting of rail mounted gantry frame, top platform with hand railing, long / cross travel arrangements, rope drums, gear systems, electric motors, electro-magnetic brake system, cabin, control panel, wire rope, ladder, motorised cable reeling drum etc., with all accessories for operating spillway stop log gate elements and river sluice / canal sluice emergency gates including cost of all materials, machinery, labour, etc., complete with all leads and lifts. (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne capacity	291654.36	
		Labour Component (including contractor's profit and Overheads)	tonne capacity		33314.60
IRR-GAW-2-5	280	<u>RAIL TRACK FOR GANTRY CRANE</u> Design, fabrication, supply, erection and commissioning of rail track using 45 kg / m standard rails on spillway bridge for movement of gantry crane for handling and operating spillway stoplog gate elements / river sluice / canal sluice emergency gate including cost of all materials, machinery, labour, complete as per specifications (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	Rm	9344.01	
		Labour Component (including contractor's profit and Overheads)	Rm		816.60
IRR-GAW-2-6	281	<u>VERTICAL LIFT GATES/STOP LOGS - ROLLER MOUNTED</u> Design, fabrication, supply, erection, testing and commissioning of fixed wheel type vertical lift service gate consisting of skin plate, vertical and horizontal girders, wheels, stiffeners, lifting brackets, guide rollers, ballast blocks, teflon clad rubber seals etc., with all accessories for river sluice / canal sluice vent including cost of all materials, machinery, labour, welding, aligning finishing seal fixing etc. with all leads and lifts, complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne	199168.63	
		Labour Component (including contractor's profit and Overheads)	tonne		61786.20
IRR-GAW-2-7	282	<u>VERTICAL LIFT GATES-ROPE DRUM HOIST UPTO 30 TON CAP. POWER OPERATED</u> Design, fabrication, supply, erection, testing and commissioning of adequate capacity rope drum hoist consisting of hoist platform, rope drum, gear system, electric motor, electro-magnetic brake system, hand operation assembly, control panel, wire rope, pulleys, ladder etc., with all accessories for operating river sluice / canal sluice service gate including cost of all materials, machinery, labour, , complete as per specifications and drawings with all leads and lifts (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne capacity	81697.91	
		Labour Component (including contractor's profit and Overheads)	tonne capacity		4328.00
IRR-GAW-2-8	283	<u>HOIST BRIDGE/ WITH TRESSELS</u> Design, fabrication, supply, erection and commissioning of structural steel hoist bridge consisting of columns, beams, bracings, stiffeners, ties, chequered plate covering, hand railing, ladder etc., with all accessories for supporting rope drum hoist for operating barrage gates including cost of all materials, machinery, labour, welding, finishing, etc., complete complete as per specifications and drawings with all leads and lifts (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne	171343.97	
		Labour Component (including contractor's profit and Overheads)	tonne		56363.50

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-GAW-2-9	284	<u>ROPE DRUM HOIST WITHOUT HOIST BRIDGE FOR BARRAGE GATES</u> Design, fabrication, supply, erection, testing and commissioning of adequate capacity rope drum hoist consisting of rope drum, pulleys, gear system, electric motor, electro-magnetic brake system, manual operation assembly, position indicator, control panel, wire rope etc., with all accessories for operating vertical lift roller gates for barrage including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc., complete with all leads and lifts. (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne capacity	39592.99	
		Labour Component (including contractor's profit and Overheads)	tonne capacity		1834.30
IRR-GAW-2-10	285	<u>SCREW GEAR HOISTS INCLUDING PLATFORM (UPTO 10 TON CAP)</u> Design, fabrication, supply, erection, testing and commissioning of adequate capacity screw gear type hoist consisting of supporting structure, platform, ladder etc., with all accessories for operating canal escape / regulator gate including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc., complete with all leads and lifts. (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne capacity	44468.89	
		Labour Component (including contractor's profit and Overheads)	tonne capacity		8284.40
IRR-GAW-2-11	286	<u>MANUAL OPERATED ROPE DRUM HOISTS</u> Design, fabrication, supply, erection, testing and commissioning of adequate capacity manually operated rope drum hoist consisting of hoist platform, rope drum, gear system, brake system, wire rope, ladder etc., with all accessories for operating canal regulator radial gate including cost of all materials, machinery, labour, welding, finishing, cleaning, ., complete with all leads and lifts (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	tonne capacity	88800.08	
		Labour Component (including contractor's profit and Overheads)	tonne capacity		11091.00
IRR-GAW-2-12 New Item2015-16-2	287	<u>OT SLUICE SHUTTERS Screw Gear Hoist Including Platform for below 5 Tons Capacity (Small Gates)</u> <u>As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad Specification drawing for Krishna Delta System</u> Fabrication, supply, erection, testing and commissioning of Embedded parts consisting of supporting structure, platform etc. with all accessories for operating canal escape/ regulator gate with all accessories including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc. complete as per Specification and approved drawings (without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	Tonne	167110.49	
		Labour Component (including contractor's profit and Overheads)	Tonne		41372.70
IRR-GAW-2-13 New Item2015-16-3	288	<u>OT SLUICE SHUTTERS EM parts for Below 5 Tons capacity (small gates)</u> <u>As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad Specification drawing for Krishna Delta System</u> Fabrication, supply, erection, testing and commissioning of Embedded parts consisting of sil beam, slide tracks, seal seats, Guide plates etc. with all accessories including cost of all materials, machinery, labour, etc. complete as per specifications and approved drawings. (without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	Tonne	118650.16	
		Labour Component (including contractor's profit and Overheads)	Tonne		34437.60

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-GAW-2-14 New Item2015-16-4	289	OT SLUICE SHUTTERS for Below 5 Tons capacity (small gates) <u>As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad</u> <u>Specification drawing for Krishna Delta System</u> Fabrication, supply, erection, testing and commissioning of Sluice Shutters consisting of skin plate, horizontal and vertical angles, stiffeners, rubber seals, clamps with all accessories for sluice shutters including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings (without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)	Tonne	283085.28	
		Labour Component (including contractor's profit and Overheads)	Tonne		17758.30
IRR-GAW-3		SAND BLASTING AND PAINTING			
IRR-GAW-3-1	290	Cleaning gates / hoists / embedded parts/lifting beams etc, to expose fresh metal surface for painting by sand blasting method as per specifications including cost of all materials, labour, machinery, scaffolding, etc., complete with initial lead for sand upto 1 km and all lifts.	sqm	600.91	
		Labour Component (including contractor's profit and Overheads)	sqm		163.30
IRR-GAW-3-2	291	painting of embedded metal parts and all types of gates , stoplogs,etc, on sand blasted surfaces with one coat of inorganic zinc silicate (airless spray preferred)70+/- 5 and two super coats with a total thickness of 300 microns (each 150+/- 5) of solventless coaltar epoxy paint each coat 150 microns (total 300 microns) cost of all materials, labour, scaffolding etc., complete with all leads and all lifts (Upstream surface of gates portion may be painted with solventless coaltar epoxy brown paint instead of solventless coaltar black. The rate for coaltar epoxy brown shall be adopted in data for Upstream side painting)	sqm	702.42	
		Labour Component (including contractor's profit and Overheads)	sqm		338.60
IRR-GAW-3-3	292	painting of Lifting beams,cat walks and other similar structures -painting hoist machinery, on sand blasted surfaces with two coats of zinc phosphate primer (airless spray preferred) 40microns/coat and twocoats of alkyd based micaceous iron oxide paint , 65 microns/coat cost of all materials, labour, scaffolding etc., complete with all leads and all lifts	sqm	502.60	
		Labour Component (including contractor's profit and Overheads)	sqm		259.60
IRR-GAW-3-4	293	HOISTS:STRUCTURAL COMPONENTS-- painting structurals on sand blasted surfaces with two coats of zinc phosphate primer (airless spray preferred) 40microns/coat and one coat 65+/- 5 of alkyd based micaceous iron oxide paint followed by two coats of synthetic enamel paint 25 microns/coat cost of all materials, labour, scaffolding etc., complete with all leads and all lifts	sqm	628.29	
		Labour Component (including contractor's profit and Overheads)	sqm		338.60
IRR-GAW-3-5	294	HOISTS:machineryCOMPONENTS-- painting hoist machinery, on sand blasted surfaces with one coats of zinc phosphate primer (airless spray preferred) 50microns/coat and three coats of aluminium paint or synthetic enamel , 25 microns/coat cost of all materials, labour, scaffolding etc., complete with all leads and all lifts	sqm	584.89	
		Labour Component (including contractor's profit and Overheads)	sqm		338.60
IRR-GAW-4		PAINTING WITHOUT SAND BLASTING			
IRR-GAW-4-1	295	E.M Parts OF ALL TYPES OF GATES Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning,applying primary coat with one coat of Protective Mastic to athickness of 70+5 microns ,followed by finishing coats 2 coats with coal tar epoxy each coat with a DFT of 150+5 microns and total DFT of all coats including Primary coat should not be less than 350 microns with material, labour and all accessories with all leads and lifts (in respect of Heavily rusted (30 to 40% rusted) surfaces)	sqm	796.67	
		Labour Component (including contractor's profit and Overheads)	sqm		338.60
IRR-GAW-4-2		Deleted from the year2015-16 onwards			

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-GAW-4-3	296	HOIST BRIDGES ,HOISTING EQUIPMENT AND CRANES,Etc, Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning,applying primary coat with two coats of Zinc chromite red oxide primer , followed by finishing coats 3 coats with synthetic enamel paint with material, labour,and all accessories with all leads and lifts where surface cleaning by sand blasting is not feasible and based on specific recommendations of designers, it is to adopt surface preparation done manually by hand and power tool after cleaning by chemical treatment to remove grease, rust, scaling etc., and to form phosphate coating to prevent further rusting, before applying primer painting.	sqm	605.69	
		Labour Component (including contractor's profit and Overheads)	sqm		338.60
IRR-GAW-4-4	297	WALK WAYS(CAT WALKS), LIFTING BEAMS,etc, Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning,applying primary coat with one coat of Zinc rich epoxy primer to a thickness of 40 microns , followed by finishing coats 2 coats with coal tar epoxy with material, labour, and all accessories with all leads and lifts	sqm	633.08	
		Labour Component (including contractor's profit and Overheads)	sqm		228.00
Chapter VI					
IRR-PMW		PRELIMINARY AND MAINTENANCE WORKS			
IRR-PMW-1		JUNGLE CLEARANCE :			
IRR-PMW-1-1	298	Clearing thin jungle growth (more than 50 percent open space) including bushes upto 30 cm / parthenium and other weeds including burning or disposing off the same as directed etc., complete.	sqm	2.47	
		Labour Component (including contractor's profit and Overheads)	sqm		2.50
IRR-PMW-1-2	299	Clearing thick jungle growth (less than 50 percent open space) including bushes upto 30 cm / parthenium and other weeds including burning or disposing off the same as directed etc., complete.	sqm	3.82	
		Labour Component (including contractor's profit and Overheads)	sqm		3.90
IRR-PMW-1-3	300	Removing stumps, tree roots, roots of bamboo clusters etc., upto 1.50 m girth including excavation, stacking the materials neatly and levelling the surface etc., complete with initial lead upto 50 m and all lifts.	Each	87.34	
		Labour Component (including contractor's profit and Overheads)	Each		87.40
IRR-PMW-1-4	301	Removing stumps, tree roots, roots of bamboo cluster etc., with girth above 1.50 m and upto 3.0 m including excavation, stacking the materials neatly and levelling the area etc., complete with initial lead upto 50 m and all lifts.	Each	196.52	
		Labour Component (including contractor's profit and Overheads)	Each		196.50
IRR-PMW-1-5	302	Removing stumps, tree roots, roots of bamboo cluster etc., with girth above 3.0 m and upto 5.0 m including excavation, stacking the materials neatly and levelling the area etc., complete with initial lead upto 50 m and all lifts.	Each	628.86	
		Labour Component (including contractor's profit and Overheads)	Each		628.90
IRR-PMW-1-6	303	Additional rate for every 0.5 m increase in girth of tree stump/stumps of bamboo cluster beyond 5 m	Each	112.18	
		Labour Component (including contractor's profit and Overheads)	Each		112.10
IRR-PMW-1-7	304	Cutting and stacking bamboos excluding removing stumps and roots etc., complete with initial lead upto 50 m and all lifts.	Each	25.47	
		Labour Component (including contractor's profit and Overheads)	Each		25.50
IRR-PMW-1-8	305	Cutting and removing jauliflora bushes upto 1.5 m girth excluding removal of stumps and including burning or disposing off the materials as directed with initial lead upto 50 m and all lifts.	Each	24.68	
		Labour Component (including contractor's profit and Overheads)	Each		24.70
IRR-PMW-1-9	306	Cutting and removing jauliflora bushes above 1.5 m upto 3.0 m girth excluding removal of stumps and including burning or disposing off the materials as directed with initial lead upto 50 m and all lifts.	Each	49.37	
		Labour Component (including contractor's profit and Overheads)	Each		49.40
IRR-PMW-1-10	307	Cutting trees above 0.3 m and upto 0.6 m girth excluding removal of stumps and including stacking the materials neatly as directed with initial lead upto 50 m and all lifts.	Each	164.60	
		Labour Component (including contractor's profit and Overheads)	Each		160.50

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-PMW-1-11	308	Cutting trees above 0.6 m and upto 1.2 m girth excluding removal of stumps and including stacking the materials neatly as directed with initial lead upto 50 m and all lifts.	Each	576.10	
		Labour Component (including contractor's profit and Overheads)	Each		562.10
IRR-PMW-1-12	309	Cutting trees above 1.2 m and upto 1.8 m girth excluding removal of stumps and including stacking the materials neatly as directed with initial lead upto 50 m and all lifts.	Each	1152.20	
		Labour Component (including contractor's profit and Overheads)	Each		1124.10
IRR-PMW-1-13	310	Cutting trees above 1.8 m and upto 2.4 m girth excluding removal of stumps and including stacking the materials neatly as directed with initial lead upto 50 m and all lifts.	Each	2304.40	
		Labour Component (including contractor's profit and Overheads)	Each		2248.20
IRR-PMW-1-14	311	Cutting trees above 2.4 m and upto 3.0 m girth excluding removal of stumps and including stacking the materials neatly as directed with initial lead upto 50 m and all lifts.	Each	3712.65	
		Labour Component (including contractor's profit and Overheads)	Each		3600.20
IRR-PMW-1-15	312	For every 0.5 m increase in girth of tree beyond 3 m add Additional rate for cutting tree for every 0.5 m increase in girth of tree beyond 3 m.	Each	1304.81	
		Labour Component (including contractor's profit and Overheads)	Each		1271.10
IRR-PMW-1-16	313	Cutting and burning or disposing off Apu / Jundu from marshy areas as directed with initial lead upto 50 m and all lifts.	sqm	8.99	
		Labour Component (including contractor's profit and Overheads)	sqm		9.00
IRR-PMW-2		PRELIMINARY WORKS :			
IRR-PMW-2-1	314	Earthwork excavation for trial pits / borrow pits and other investigation works in all kinds of soil including boulders upto 30 cm dia and disposing off excavated soil as directed with lead upto 10 m and lift upto 3 m.	cum	449.63	
		Labour Component (including contractor's profit and Overheads)	cum		449.60
IRR-PMW-2-2	315	Earthwork excavation for trial pits / borrow pits and other investigation works in soft rock including disposing off the excavated rock as directed with lead upto 10 m and lift upto 3 m.	cum	623.75	
		Labour Component (including contractor's profit and Overheads)	cum		623.70
IRR-PMW-2-3	316	Conducting geophysical investigation studies by electrical resistivity method in stages of 5m for sub-surface details such as depth of formations, shear zones, classification of strata, depth of water table etc., including cost of all materials, equipments, labour, analysing and reporting the details of field studies conducted etc., complete excluding cost of transportation arrangements.	stage	494.43	
		Labour Component (including contractor's profit and Overheads)	stage		423.60
IRR-PMW-2-4	317	Drilling 80 mm dia hole through over-burden using casing shoe bit vertical or inclined upto 10 degrees to vertical as directed including cost of all materials, machinery, labour, water charges, reaming, collection of wash samples at suitable intervals, logging and labelling, supplying honne wood core box, fixing casing pipes (excluding cost of casing pipes) etc., complete for depth upto 30 m from surface. 1. For drilling through over-burden beyond 30 m from surface increase the rate per Rm by 10 percent. 2. For providing HDPE or light black MS casing pipe add the cost of pipe per Rm.	Rm	1626.49	
		Labour Component (including contractor's profit and Overheads)	Rm		749.90

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-PMW-2-5	318	Drilling 76 mm dia (NX) core hole in hard rock using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging and labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface. 1. For drilling in hard rock beyond 30 m upto 60 m from surface increase the rate per Rm by 25 percent. 2. For drilling in hard rock beyond 60 m upto 90 m from surface increase the rate per Rm by 40 percent.	Rm	8214.80	
		Labour Component (including contractor's profit and Overheads)	Rm		2844.10
IRR-PMW-2-5-A (New Item2015-16)-5	319	Drilling 76 mm dia (NX) core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface for Primary and Secondary Holes 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the rate per Rm by 25 percent. 2. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 60 m upto 90 m from surface increase the rate per Rm by 40 percent.	Rm	5341.23	
		Labour Component (including contractor's profit and Overheads)	Rm		1697.00
IRR-PMW-2-5-B (New Item2015-16)-6	320	Drilling 76 mm dia (NX) core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging and labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface for Test Holes 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the rate per Rm by 25 percent. 2. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 60 m upto 90 m from surface increase the rate per Rm by 40 percent.	Rm	6117.36	
		Labour Component (including contractor's profit and Overheads)	Rm		1698.00
IRR-PMW-2-6	321	Drilling 47 mm (BX)dia core hole in hard rock using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging, labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface. 1. For drilling in hard rock beyond 30 m upto 60 m from surface increase the rate per Rm by 25 percent. 2. For drilling in hard rock beyond 60 m upto 90 m from surface increase the rate per Rm by 40 percent.	Rm	8016.35	
		Labour Component (including contractor's profit and Overheads)	Rm		2844.10
IRR-PMW-2-6-A (New Item2015-16)-7	322	Drilling 47 mm (BX)dia core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, and redrilling in case of collapse of sides etc., complete for depth upto 30 m 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the rate per Rm by 25 percent. 2. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 60 m upto 90 m from surface increase the rate per Rm by 40 percent.	Rm	5059.61	
		Labour Component (including contractor's profit and Overheads)	Rm		1697.00
IRR-PMW-2-7	323	Providing and fixing 20 x 20 x 75 cm size roughly dressed boundary / demarcation / chainage / arrow stones including cost of all materials, labour, engraving marks, fixing in position, murum filling etc., complete with lead upto 50 m and all lifts.	Each	256.77	
		Labour Component (including contractor's profit and Overheads)	Each		205.80

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-PMW-2-8	324	Providing and fixing 20 x 20 x 75 cm size temporary bench mark stone in CC 1 : 4 : 8 using 40 mm down size graded coarse aggregate including cost of all materials, labour, dressing top surface, engraving BM data etc.,complete with lead upto 50 m and all lifts.	Each	772.19	
		Labour Component (including contractor's profit and Overheads)	Each		597.00
NOTE:		For providing 30 cm thick compacted murum bed in B.C soil area including additional excavation for thickness of murum bedding add per	Each	4.00	
IRR-PMW-2-9	325	Providing and fixing 20 x 20 x 75 cm size permanent bench mark stone in CC 1 : 3 : 6 block of size 90 x 90 x 120 cm using 40 mm down size graded coarse aggregate and providing 35 cm thick 30 cm high UCR masonry in CM 1 : 5 proportion protective wall around the BM stone, including cost of all materials, labour, dressing top surface of stone, engraving BM data	Each	8804.63	
		Labour Component (including contractor's profit and Overheads)	Each		5385.40
IRR-PMW-3		MAINTENANCE WORKS :			
IRR-PMW-3-1	326	Removing dry stone rock-toe / rivetment and filter layers below rock-toe/ rivetment including stacking all materials separately as directed with initial lead upto 50 m and all lifts.	cum	358.97	
		Labour Component (including contractor's profit and Overheads)	cum		359.00
IRR-PMW-3-2	327	Re-constructing 60 cm thick hand packed rough stone revetment with through stones at 1.5 m c / c over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded aggregates satisfying filter criteria laid in layers of 15 cm thick each using sand from approved quarry and stones and filter aggregates obtained from revetment removed for re-construction including cost of all machinery, labour, laying filter and stones to specified slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts.	sqm	373.41	
		Labour Component (including contractor's profit and Overheads)	sqm		268.20
IRR-PMW-3-3	328	Re-constructing dry rubble rock-toe and filter media for rock-toe consisting of sand 20 mm and 80 mm size graded aggregates satisfying filter criteria laid in layers of 15 cm thick each using sand from approved quarry and stones and filter aggregates obtained from rock-toe removed for re-construction including cost of all machinery, labour, laying filter and stones to specified slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts.	cum	451.55	
		Labour Component (including contractor's profit and Overheads)	cum		384.20
IRR-PMW-3-4	329	Removing and resetting disturbed Yarguntla / Shahabad / Talikot / PCC / Other types of slab lining set in CM 1 : 3 including flush cement mortar pointing in CM 1 : 3 with lead upto 50 m and all lifts.	sqm	96.28	
		Labour Component (including contractor's profit and Overheads)	sqm		89.80
IRR-PMW-3-5	330	Removing and resetting disturbed dry rubble / khandki stone pitching 25 to 45 cm thick including packing, wedging, finishing etc., complete with all leads and lifts.	sqm	92.99	
		Labour Component (including contractor's profit and Overheads)	sqm		93.10
IRR-PMW-3-6	331	Removing and refixing disturbed chainage / demarcation / hectometre / guard stones including excavation, back filling etc., complete with all leads and lifts.	Each	124.03	
		Labour Component (including contractor's profit and Overheads)	Each		124.00
IRR-PMW-3-7	332	Removing and refixing disturbed km stone / sign board / hecto-metre stone etc., including excavation, back filling with available stuff after refixing, forming base platform of size 90 x 90 x 7.5 cm including watering, ramming etc complete with all leads and lifts.	Each	279.07	
		Labour Component (including contractor's profit and Overheads)	Each		279.10
IRR-PMW-3-8	333	Providing impervious hearting for breached / damaged portion of embankment with soil from approved borrow areas in layers of 10 to 15 cm before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts.	cum	246.48	
		Labour Component (including contractor's profit and Overheads)	cum		51.10

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-PMW-3-9	334	Providing pervious/semi-pervious casing for breached / damaged portion of embankment with soil from approved borrow areas in layers of 10 to 15 cm before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts.	cum	283.09	
		Labour Component (including contractor's profit and Overheads)	cum		61.50
IRR-PMW-3-10	335	Providing impervious hearting for breached / damaged portion of embankment with soil from approved dump areas in layers of 10 to 15 cm before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts.	cum	226.27	
		Labour Component (including contractor's profit and Overheads)	cum		49.00
IRR-PMW-3-11	336	Providing pervious /semi-pervious casing for breached /damaged portion of embankment with soil from approved dump areas in layers of 10 to 15 cm before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts.	cum	258.66	
		Labour Component (including contractor's profit and Overheads)	cum		58.10
IRR-PMW-3-12	337	Repairing rain cuts / resectioning canal slopes to required lines and grades as directed using available soil including dressing, clod breaking, packing, tamping etc., complete with all leads and lifts.	sqm	6.29	
		Labour Component (including contractor's profit and Overheads)	sqm		6.30
IRR-PMW-3-13	338	Cleaning drainage gallery, adits, instrumentation galleries etc., by scrubbing / brushing including chiselling and removing leached lime deposit and disposing off all the waste material out side adits in specified location etc., complete with all leads and lifts.	Rm	64.04	
		Labour Component (including contractor's profit and Overheads)	Rm		55.10
IRR-PMW-3-14	339	Cleaning dam parapet inner face and top using oxalic acid and water by scrubbing / brushing and washing to remove all surface coatings etc., complete .	Rm	53.71	
		Labour Component (including contractor's profit and Overheads)	Rm		40.60
IRR-PMW-3-15		Deleted from the year2013-14 onwards			
IRR-PMW-3-16		Deleted from the year2013-14 onwards			
IRR-PMW-3-17		Deleted from the year2013-14 onwards			
IRR-PMW-3-18		Deleted from the year2013-14 onwards			
IRR-PMW-3-19		Deleted from the year2013-14 onwards			
IRR-PMW-3-20	340	Excavation and removal of silt and silt mixed with sand from canal bed in dry condition including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with initial lead upto 50 m and all lifts.	cum	270.40	
		Labour Component (including contractor's profit and Overheads)	cum		270.40
IRR-PMW-3-21	341	Excavation and removal of silt or silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with initial lead upto 50 m and all lifts.	cum	338.01	
		Labour Component (including contractor's profit and Overheads)	cum		338.00

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
IRR-PMW-3-22 (new Item5 2010-11) (for Minor Works)	342	Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning,etc.,complete with initial lead upto 1 km and all lifts.	cum	126.17	
		Labour Component (including contractor's profit and Overheads)	cum		24.00
IRR-PMW-3-23 (new Item6 2010-11) (for Minor Works)	343	Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as watering, compactingto density control of not less than 95 percent or as stipulated using 8T roller etc., complete with initial lead upto 1 km and all lifts.	cum	60.75	
		Labour Component (including contractor's profit and Overheads)			11.70
IRR-PMW-3-24 (new Item7 2010-11)	344	Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as compactingto density control of not less than 90 percent or as stipulated using 2T roller etc., complete with initial lead upto 1 km and all lifts.	cum	9.38	
		Labour Component (including contractor's profit and Overheads)	cum		2.30
(New Item 2012-13-3)		Weed Removal by Manual Means			
IRR-PMW-3-25(a)	345	Removal of Water Hyacinth up to 30 cm thick	Sqm	11.01	
IRR-PMW-3-25(b)	346	Removal of Water Hyacinth beyond 30 cm thick	Sqm	15.05	
IRR-PMW-3-25(c)	347	Clearing Alchi Tilla	Sqm	10.11	
IRR-PMW-3-25(d)	348	Removal of Jammu	Sqm	8.54	
IRR-PMW-3-25(e)	349	Removal of Imponea, Cornea	Sqm	10.11	
IRR-PMW-3-25(f) (new Item 2012-13-6)	350	Removal of Natchu, goobi, thooti, etc.	Sqm	3.23	
IRR-PMW-3-26 New Item2015-16-8	351	<u>PAINTING OF SLUICES FOR MAINTENANCE WORKS</u> Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning, applying primary coat with one coat of Zinc rich epoxy primer to a thickness of 100 microns, followed by finishing coats 2 coats with Coal tar epoxy with material, labour, and all accessories with all leads and lifts.	Sqm	535.63	
		Labour Component (including contractor's profit and Overheads)	Sqm		280.63
IRR-PMW-3-27 New Item2018-19		Lifting of water from rivers/drains to agricultural fields and where there is no element of excavation			
		a) Water lifting charges using Electrical driven pump	per hp hr	10.37	
		Other pumping arrangements including pipes, labour, pump operator etc	per hr	235.39	
		b) Water lifting charges using Diesel driven pump	per hp hr	32.81	
		Other pumping arrangements including pipes, labour, pump operator etc.,	per hr	284.69	
COM-MWRK		New extra items-- common item for all earth works using only manual labour for all other works without involving contractors			
COM-MWRK-1	352	(Manual) Excavation in all kinds of soil including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) With 3 Cum per day output	cum	198.33	

Chapterwise item No.	S.NO	Item description	Unit	Rate	Itemwise unit rate for Labour Component
1	2	3	4	5	6
COM-MWRK-2	353	(Manual) Excavation in all kinds of soil/HDR including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) With 2.5 Cum per day output	cum	238	
COM-MWRK-3	354	(Manual) Excavation in soft rock (including F&F rock) without blasting , including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) Soft rock 1.33 Cum/Day	cum	447.37	
COM-MWRK-4	355	(Manual) Excavation in hard rock , including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) Hard rock 0.67Cum/ day	cum	888.06	

Abstract

LEAD, LIFT, LOADING AND UNLOADING CHARGES FOR MATERIALS FOR THE YEAR: 2024-25

COM-LDLFT

- 1 For total lead upto 150 m (including initial lead) lead charges by head load only shall be adopted irrespective of mode of conveyance.
- 2 For total lead exceeding 150 m conveyance by mechanical means only shall be adopted irrespective of mode of conveyance.
- 3 The rates for loading at quarry including idle hire charges of trucks and hire charges per for each kilometer and upto 5 km are cumulative and inclusive of total charges for preceding lead.
- 4 Unless otherwise specified lead charges for Earth / Sand / Gravel / Aggregates and Stones are for loose volume and not for compacted or in-situ volume.
- 5 The rates for lift charges, lead charges hire charges are cumulative and inclusive of rates for preceding lift, load and hire charges
- 6 Lift charges are not payable where conveyance of materials is by mechanical means to final placing point.
- 7 Loading and unloading charges are not payable for conveyance by head load.
- 8 Loading charges are not payable for conveyance by mechanical means for disposal of excavated materials beyond initial lead of 50 m wherever specified.
- 9 Loading and unloading charges are not payable for conveyance by mechanical means for disposal of excavated materials beyond initial lead of 1 km wherever specified.
- 10 The rates for unloading of materials except earth, sand, gravel, coarse aggregate, rubble, size stone and cut stone are inclusive of stacking.
- 11 Hire charges are per 1KM for tippers and trucks for transport of materials from work site to dump yard & other places are cumulative and includes previous km upto 5 kms
- 12 The lead & lift charges are exclusive of contractor's profit and overhead charges of 13.615%
- 13 The loading & unloading charges are exclusive of contractor's profit and overhead charges of 13.615%
- 14 During the BoCE meeting held on 10.06.2015, the BoCEs has recommended to withdraw lead charges, loading and unloading charges for Cement as per the minutes of meeting of Sub-Committee held on 29.06.2015. (The conveyance charges, loading & unloading charges for cement are displayed for information purpose only).
- 15 As per the BOCE meeting held on 21.08.2019 in order to simplify the procedure of adding lead charges to the data items in the CFMS work module, the BOCE recommended to delete the contractor profit and overhead charges from the calculation of Lead, Lift, Loading and Unloading charges. But at the time of preparation of estimates the contractor profit and overhead charges on Lead, Lift, Loading and Unloading charges shall be added as usual.

**COM-LDLFT-1 A. (Lead) Conveyance Charges for materials by head load
FOR THE YEAR: 2023-24**

Sl No.	Total distance (Total lead includes initial lead)	Earth / Sand /Gravel / Murrum/ Lime/ Surki/ Size stone / Cut stone Rubble / Coarse aggregate Rs/Cum	Cement/Reinforc e-ment steel Str steel Rs / tonne	PCC slab/ Shahbad slab / CC block/ BS slab/ Late- rite / Wood Rs / cum
1	2	3	4	5
1	Total lead upto 50 m (covered by item rate)	initial lead	initial lead	initial lead
2	Total lead upto 100 m	85.00	49.58	108.18
3	Total lead upto 150 m	170.00	99.17	216.36

Notes: 1. No loading or unloading charges are admissible for conveyance by head load.
2. For total lead exceeding 150 m conveyance charges by mechanical means only shall be adopted irrespective of mode of conveyance.

COM-LDLFT-2 B.(Lead) Conveyance charges for machinery per kilometer for transporting materials by tippers and trucks excluding loading, unloading and idle hire charges of machinery
(No loading and unloading charges allowed for machinery loading and unloading)

Sl No.	Distance	(Lead) charges for trucks and tippers for Earth / Sand /Gravel / Murrum/ Lime/ Surki/ per cu.meter	(Lead) charges for trucks and tippers for Rubble/Size stones/ Cut Stones/ Coarse aggregate per cu.meter	(Lead) charges for trucks and tippers for Cement/ Steel/ RCC poles/ AC & GI sheets/ Packed materials/tonne	(Lead) charges for trucks and tippers per cu.meter for PCC slabs/ Shahabad slabs/ CC & Laterite blocks/ Wood/ cum	(Lead) charges for trucks and tippers per cu.meter for water/ 1000 litres	(Lead) charges for trucks per 1000 Nos. of Bricks
1	2	3	4	5	6	7	8
1	Lead upto 1 km	38.00	36.54	22.84	53.74	23.05	60.90
2	Lead upto 2 km	53.20	51.16	31.97	75.23	32.27	85.26
3	Lead upto 3 km	70.93	68.21	42.63	100.31	43.02	113.68
4	Lead upto 4 km	86.13	82.82	51.77	121.80	52.24	138.04
5	Lead upto 5 km	101.33	97.44	60.90	143.30	61.46	162.40
6	for Every km beyond 5 km upto 30 km	15.20	14.62	9.14	21.49	9.22	24.36
7	for Every km beyond 30 km	12.67	12.18	7.61	17.91	7.68	20.30

COM-LDLFT-3 C. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (idle hire charges of trucks are not added)

Sl No.	Description of item	Earth / Sand /Gravel Murrum/ / Surki/ Rs / cum	Rubble/ size stone/ cut stone/ Coarse aggregate,Lime in Rs/cum	cement in Rs/tonne	steel in Rs./tonne	brick work Rs/1000 No
1	2	3	4	5	6	7
1	Loading	28.21	56.42	93.09	111.58	77.58
2	Unloading	14.11	28.21	93.09	111.58	77.58

COM-LDLFT-4 D. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (including idle hire charges of trucks)

Sl No.	Description of item	Earth / Sand /Gravel Murrum/ / Surki/ Rs / cum	Rubble/ size stone/ cut stone/ Coarse aggregate,Lime in Rs/cum	cement in Rs/tonne	steel in Rs./tonne	brick work Rs/1000 No
1	2	3	4	5	6	7
1	Loading	138.94	167.15	214.89	233.38	278.55
2	Unloading	50.87	83.58	214.89	233.38	278.55

COM-LDLFT-5 E. LOADING AND UNLOADING CHARGES BY MECHANICAL MEANS (including idle hire charges of trucks)

Sl No.	Description of item	Earth / Sand /Gravel Murrum/ / Surki/ Rs / cum	Rubble/ size stone/ cut stone/ Coarse aggregate,Lime in Rs/cum
1	2	3	4
1	Loading	60.12	119.48
2	Unloading	19.19	19.19

COM-LDLFT-6 F. LIFT CHARGES FOR MATERIALS BY HEAD LOAD

Sl No.	Total lift (Total lift includes initial lift)	Earth / Sand /Gravel Murrum/ Lime/ Surki/ Size stone / Cut stone Rubble / Coarse aggregate Rs / cum	Cement/ Reinforce- ment steel Str steel Rs / tonne	PCC slab/ Shahbad slab / CC block/ BS slab / Laterite / Wood Rs / cum
1	2	3	4	5
1	Total lift upto 3 m (covered by item rate)	Initial lift	Initial lift	Initial lift
2	For Every 1.00 Lift beyond initial lift of 3 meters	9.92	7.17	13.22

Chapter - I

DAM AND ALLIED WORKS - Standard Data

(WILL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY / AS NEEDED)

FOR THE YEAR :2024-25

Index- code

IRR-DAW

DAM AND ALLIED WORKS - DATA RATES

Directions to add Seigniorage Charges and Additional Lead Charges

Seigniorage Charges:

1. The unit rate for work item in the Standard Data is **exclusive of Seigniorage Charges** wherever applicable.
2. The appropriate Seigniorage Charges for relevant materials are to be added in the Part-B of the estimate

Additional Lead and Lift Charges:

1. Unless otherwise specified the basic item rates (i.e., specifications) are inclusive of all lifts.
2. For concrete, masonry and reinforcement items (i.e., specifications) **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:
Additional lead charges for Steel, sand, coarse aggregate, stones and stone chips shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item. In case of Cement and Steel, Loading and unloading charges are already added in the work item while arriving the unit rate and hence should not be added again

Example:

Total lead for sand from approved sand quarry :		15.00 Km
Initial lead included in the basic item rate in the data (i.e., item specification) :		1.00 Km
Additional lead charges : Lead charges for 5 km	Rs.	115.13
Lead charges for next 10 km	Rs.	172.69
Total lead charges for 15 km /cum	Rs.	287.82
Less 1 km initial lead charges /cum	Rs.	43.17 (-)
Net additional lead charges / cum	Rs.	244.65

3. The Leads for Steel shall be from the nearest market place to the Project area
4. For earth/rockfill embankments **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows: Additional lead charges for Earth, Murrum etc., shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item. (**same as above**)

Example:

Total lead for earth from approved borrow area :		15.00 Km
Initial lead included in the basic item rate in the data (i.e., item specification) :		1.00 Km
Additional lead charges : Lead charges for 5 km	Rs.	115.13
Lead charges for next 10 km	Rs.	172.69
Total lead charges for 15 km /cum	Rs.	287.82
Less 1 km initial lead charges /cum	Rs.	43.17 (-)
Net additional lead charges / cum	Rs.	244.65

5. The initial lead up to 50 m as mentioned in some standard data items is meant for manual lead within the working area. For conveyance of materials, the lead required from quarry/Borrow area/ Dump Area to worksite shall be added to the data without deducting the 50 m initial lead charges

DAW - Work Items

IRR-DAW-1

EXCAVATION & FOUNDATION TREATMENT WORKS:

IRR-DAW-1-1

Excavation for foundation **in all kinds of soil** including boulders **upto 0.30 m** diameter for dam, spillway, intake structure and other appurtenant works and placing the excavated soil neatly in dump area or disposing off the same as directed etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

A. MATERIALS:

UNIT
880 cum

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
2	Dumpers 5 cum capacity 6 Nos	Hour	48.00000	628.34	30160.32
	Fuel / Energy charges	Hour	48.00000	675.13	32406.24
3	Tipper 5 cum capacity 1 No	Hour	8.00000	483.37	3866.96
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
Total hire charges of Machinery				Rs:	96282.96

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	Crew for Dumper	Hour	48.00000	354.43	17012.64
3	Crew for Tipper	Hour	8.00000	276.90	2215.20
4	work inspector	Day	1.00000	775.00	775.00
5	mazdoor	Day	16.00000	595.00	9520.00
Total cost of Labour				Rs:	32476.44

labour component/unit qty	36.90
Add contractor's profit and overhead charges	13.615% 5.00
labour component/unit qty (including contractor's profit)	41.90

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	96282.96
C. Cost of Labour	Rs:	32476.44
Total	Rs:	128759.40
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 17530.59
Total cost for	880.00 cum	Rs: 146289.99
Rate per	cum (A+B+C+D)/880	Rs: 166.24

IRR-DAW-1-2

Excavation for foundation in **ordinary rock (including HDR)** without blasting including boulders above **0.3 m upto 0.6 m** dia for dam, spillway, intake structure and other appurtenant works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**UNIT :
520 cum

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
2	Dumpers 5 cum capacity(4 Nos)	Hour	32.00000	628.34	20106.88
	Fuel / Energy charges	Hour	32.00000	675.13	21604.16
3	Tipper 5 cum capacity(1 No)	Hour	8.00000	483.37	3866.96
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
Total hire charges of Machinery				Rs:	75427.44

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	Crew for Dumper	Hour	32.00000	354.43	11341.76
3	Crew for Tipper	Hour	8.00000	276.90	2215.20
4	work inspector	Day	1.00000	775.00	775.00
5	Crowbarman	Day	2.50000	640.00	1600.00
6	mazdoor	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs:	24835.56

labour component/unit qty	47.80
Add contractor's profit and overhead charges	13.615% 6.50
labour component/unit qty (including contractor's profit)	54.30

ABSTRACT:

A. Cost of Materials			Rs:	0.00
B. Hire charges of Machinery			Rs:	75427.44
C. Cost of Labour			Rs:	24835.56
	Total		Rs:	100263.00
D.Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	13650.81
Total cost for	520.00	cum	Rs:	113913.81
Rate per	cum (A+B+C+D)/520		Rs:	219.07

IRR-DAW-1-3

Excavation for foundation in **hard rock (including F&F rock) requiring blasting** including boulders above **0.6 m upto 1.2 m** dia. for dam, spillway, intake structure and other appurtenant works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete with **initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**UNIT :
520.00 cum.

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of 1.5 m drill rod	Rm	216.00000	23.37	5047.92
	Reconditioning charges @	10%			504.79
2	Use rate of air hose 4 Nos.	Hour	26.00000	12.19	316.94
3	Explosive small dia	kg	104.00000	73.00	7592.00
4	Electric detonators	Nos	154.00000	12.00	1848.00
5	Fuse coil	Rm	320.00000	11.00	3520.00
6	Sundries	LS	5.00000	41.00	205.00
Total cost of Materials				Rs.	19034.65

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
2	Dumpers 5 cum capacity 4 Nos.	Hour	32.00000	628.34	20106.88
	Fuel / Energy charges	Hour	32.00000	675.13	21604.16
3	Tipper 5 cum capacity 1 No	Hour	8.00000	483.37	3866.96
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
4	Air compressor 8.5 cmm (ele) 2 Nos	Hour	13.00000	172.20	2238.60
	Fuel / Energy charges	Hour	13.00000	475.86	6186.18
5	Jack hammers 4 Nos.	Hour	26.00000	19.11	496.86
	Fuel / Energy charges	Hour	26.00000	0.00	0.00
Total hire charges of Machinery				Rs:	84349.08

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	Crew for Dumper	Hour	32.00000	354.43	11341.76
3	Crew for Tipper	Hour	8.00000	276.90	2215.20
4	Crew for Air compressor	Hour	13.00000	260.33	3384.29
5	Crew for Jack hammer	Hour	26.00000	520.65	13536.90
6	work inspector	Day	1.00000	775.00	775.00
7	Blaster	Day	1.00000	780.00	780.00
8	Helper blaster	Day	1.00000	640.00	640.00
9	Crowbarman	Day	2.50000	640.00	1600.00
10	Stone breaker	Day	1.00000	640.00	640.00
11	mazdoor	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs.	43816.75

labour component/unit qty	84.30
Add contractor's profit and overhead charges	13.615%
labour component/unit qty (including contractor's profit)	95.80

ABSTRACT:

A. Cost of Materials			Rs:	19034.65
B. Hire charges of Machinery			Rs:	84349.08
C. Cost of Labour			Rs:	43816.75
	Total		Rs:	147200.48
D.Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	20041.35
Total cost for	520.00	cum.	Rs:	167241.83
Rate per	cum. (A+B+C+D)/520		Rs:	321.62

IRR-DAW-1-3A
New Item 2015-16-1

Excavation for foundation in **hard rock (including F&F rock)** including boulders above **0.6 m upto 1.2 m** dia. **by controlled blasting and controlling fly rock by muffling arrangements** for dam, spillway, intake structure and other appurtenant works and other open foundation works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete with **initial lead upto 1 km and all leads**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

520.00 cum.

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of 1.5 m drill rod	Rm	216.00000	23.37	5047.92
	Reconditioning charges @	10%			504.79
2	Use rate of air hose 4 Nos.	Hour	26.00000	12.19	316.94
3	Use rate of chain link wire mesh	Sq m	500.00000	69.83	34915.00
4	Use rate of Sand Bags	Nos.	190.00000	111.72	21226.80
5	Explosive small dia	kg	104.00000	73.00	7592.00
6	Electric delay detonators	Nos	154.00000	24.00	3696.00
7	Fuse coil	Rm	320.00000	11.00	3520.00
8	Sundries	LS	5.00000	41.00	205.00
Total cost of Materials				Rs.	77024.45

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
2	Angle dozer 90 hp	Hour	1.00000	1651.08	1651.08
	Fuel / Energy charges	Hour	1.00000	1030.76	1030.76
3	Dumpers 5 cum capacity 4 Nos.	Hour	32.00000	628.34	20106.88
	Fuel / Energy charges	Hour	32.00000	675.13	21604.16
4	Tipper 5 cum capacity 1 No	Hour	8.00000	483.37	3866.96
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
5	Air compressor 8.5 cmm (ele) 2 Nos	Hour	13.00000	172.20	2238.60
	Fuel / Energy charges	Hour	13.00000	475.86	6186.18
6	Jack hammers 4 Nos.	Hour	26.00000	19.11	496.86
	Fuel / Energy charges	Hour	26.00000	0.00	0.00
Total hire charges of Machinery				Rs.	87030.92

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	Crew for Angle dozer	Hour	1.00000	369.20	369.20
3	Crew for Dumper	Hour	32.00000	354.43	11341.76
4	Crew for Tipper	Hour	8.00000	276.90	2215.20
5	Crew for Air compressor	Hour	13.00000	260.33	3384.29
6	Crew for Jack hammer	Hour	26.00000	520.65	13536.90
7	work inspector	Day	3.00000	775.00	2325.00
8	Blaster	Day	1.50000	780.00	1170.00
9	Helper blaster	Day	2.00000	640.00	1280.00
10	Crowbarman	Day	2.50000	640.00	1600.00
11	Stone breaker	Day	2.00000	640.00	1280.00
12	mazdoor	Day	18.00000	595.00	10710.00
Total cost of Labour				Rs.	52165.95

labour component/unit qty	100.30
Add contractor's profit and overhead charges	13.615% 13.70
labour component/unit qty (including contractor's profit)	114.00

ABSTRACT:

A. Cost of Materials	Rs:	77024.45
B. Hire charges of Machinery	Rs:	87030.92
C. Cost of Labour	Rs:	52165.95
	Total	Rs: 216221.32
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 29438.53
Total cost for	520.00	Rs: 245659.85
Rate per	cum. (A+B+C+D)/520	Rs: 472.42

IRR-DAW-1-4
(a)

Excavation for foundation in **hard rock of all toughness by blasting** including boulders **above 1.2 m** dia. for dam, spillway, intake structure and other appurtenant works and placing the excavated rock neatly in dump area or stack yard including levelling as directed etc., complete with **initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

					UNIT
					320.00 cum
A. MATERIALS:					
Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of drill rod 1.5 m long	Rm	310.00000	31.16	9659.60
	Reconditioning charges @	10%			965.96
2	Use rate of air hose 4 Nos.	Hour	48.00000	12.19	585.12
3	Explosive small dia	kg	95.00000	73.00	6935.00
4	Ordinary detonators	Nos	10.00000	9.00	90.00
5	Electric detonators	Nos	333.00000	12.00	3996.00
6	Fuse coil	Rm	450.00000	11.00	4950.00
7	Sundries	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	27386.68

B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
2	Dumpers 5 cum capacity 3 Nos.	Hour	24.00000	628.34	15080.16
	Fuel / Energy charges	Hour	24.00000	675.13	16203.12
3	Tipper 5 cum capacity 1 No	Hour	4.00000	483.37	1933.48
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
4	Angle dozer 90 hp	Hour	1.00000	1651.08	1651.08
	Fuel / Energy charges	Hour	1.00000	1030.76	1030.76
5	Air compressor 8.5 cmm (ele) 2 Nos.	Hour	24.00000	172.20	4132.80
	Fuel / Energy charges	Hour	24.00000	475.86	11420.64
6	Jack hammers 4 Nos.	Hour	48.00000	19.11	917.28
	Fuel / Energy charges	Hour	48.00000	0.00	0.00
Total hire charges of Machinery				Rs.	80193.40

C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	Crew for Dumper	Hour	24.00000	354.43	8506.32
3	Crew for Tipper	Hour	4.00000	276.90	1107.60
4	Crew for Dozer	Hour	1.00000	369.20	369.20
5	Crew for Air compressor	Hour	24.00000	260.33	6247.92
6	Crew for Jack hammer	Hour	48.00000	520.65	24991.20
7	work inspector	Day	1.00000	775.00	775.00
8	Blaster	Day	1.00000	780.00	780.00
9	Helper blaster	Day	1.00000	640.00	640.00
10	Crowbarman	Day	1.00000	640.00	640.00
11	Stone breaker	Day	2.00000	640.00	1280.00
12	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs.	51860.84

labour component/unit qty	162.10
Add contractor's profit and overhead charges	13.615% 22.10
labour component/unit qty (including contractor's profit)	184.20

ABSTRACT:

A. Cost of Materials		Rs: 27386.68
B. Hire charges of Machinery		Rs: 80193.40
C. Cost of Labour		Rs: 51860.84
	Total	Rs: 159440.92
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 21707.88
Total cost for	320.00 cum	Rs: 181148.80
Rate per	cum (A+B+C+D)/320	Rs: 566.09

IRR-DAW-1-5
(b)

Excavation for foundation in **hard rock of all toughness** including boulders **above 1.2 m dia.** by controlled blasting method and controlling fly-rock by muffling arrangements for dam, spillway, intake structure and other appurtenant structures etc., including placing and levelling the excavated rock neatly in dump area or other place as directed etc., complete with **lead upto upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT :
480.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of drill rod 1.5 m length	Rm	464.00000	31.16	14458.24
	Reconditioning charges @	10%			1445.82
2	Use rate of 50 m air hose 4 Nos.	Hour	70.00000	12.19	853.30
3	Use rate of chain link wire mesh	sqm	715.00000	64.13	45852.95
4	Use rate of sand bag	Nos	580.00000	111.72	64797.60
5	Explosive small dia.	kg	149.00000	73.00	10877.00
6	Ordinary detonators	Nos	23.00000	9.00	207.00
7	Electric delay detonators	Nos	500.00000	24.00	12000.00
8	Fuse coil	Rm	700.00000	11.00	7700.00
9	Sundries	LS	10.00000	41.00	410.00
Total cost of Materials				Rs:	158601.91

B. MACHINERY:

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Shovel 0.85 cum capacity	Hour	12.00000	1751.36	21016.32
	Fuel / Energy charges	Hour	12.00000	1473.48	17681.76
2	Angle dozer 90 hp	Hour	2.00000	1651.08	3302.16
	Fuel / Energy charges	Hour	2.00000	1030.76	2061.52
3	Dumpers 5 cum capacity 3 Nos.	Hour	36.00000	628.34	22620.24
	Fuel / Energy charges	Hour	36.00000	675.13	24304.68
4	Tipper 5 cum capacity 1 No	Hour	4.00000	483.37	1933.48
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
5	Air compressor 8.5 cmm (ele) 2 Nos	Hour	35.00000	172.20	6027.00
	Fuel / Energy charges	Hour	35.00000	475.86	16655.10
6	Jack hammers 4 Nos.	Hour	70.00000	19.11	1337.70
	Fuel / Energy charges	Hour	70.00000	0.00	0.00
Total hire charges of Machinery				Rs:	118965.32

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Shovel	Hour	12.00000	369.20	4430.40
2	Crew for Angle dozer	Hour	2.00000	369.20	738.40
3	Crew for Dumper	Hour	36.00000	354.43	12759.48
4	Crew for Tipper	Hour	4.00000	276.90	1107.60
5	Crew for Air compressor	Hour	35.00000	260.33	9111.55
6	Crew for Jack hammer	Hour	70.00000	520.65	36445.50
7	work inspector	Day	4.50000	775.00	3487.50
8	Blaster	Day	1.50000	780.00	1170.00
9	Helper blaster	Day	3.00000	640.00	1920.00
10	Crowbarman	Day	2.50000	640.00	1600.00
11	Stone breaker	Day	2.50000	640.00	1600.00
13	mazdoor	Day	20.00000	595.00	11900.00
Total cost of Labour				Rs.	86270.43

labour component/unit qty	179.70
Add contractor's profit and overhead charges	13.615% 24.50
labour component/unit qty (including contractor's profit)	204.20

ABSTRACT:

A. Cost of Materials	Rs:	158601.91
B. Hire charges of Machinery	Rs:	118965.32
C. Cost of Labour	Rs:	86270.43
	Rs:	363837.66
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs. 49536.5
Total cost for	480.00	Rs: 413374.16
Rate per cum	(A+B+C+D)/480	Rs: 861.20

IRR-DAW-1-6
(c)

Excavation for foundation in **hard rock of all toughness** including boulders **above 1.2 m dia. by line drilling and smooth blasting and controlling** fly-rock by muffling arrangements for dam, spillway, intake structure and other appurtenant structures etc., including dressing sides and bed to required level / profile, placing and levelling the excavated rock neatly in dump area or other place as directed etc., complete **with lead upto 1 km and all lifts.**

Note :

- 1 m width of excavation along the face to be dressed shall be treated as excavation by line drilling and smooth blasting.
- The rate includes controlling fly-rock wherever required.
- The rate under this item shall be paid only on ascertaining that the surface requiring dressing has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval.
- In case, where the above criteria is not fulfilled payment shall be restricted to the rate provided for excavation by normal or controlled blasting as the case may be..

DATA:

RATE ANALYSIS

UNIT :

40.00 cum**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of drill rod 1.5 m length	Rm	138.00000	31.16	4300.08
	Reconditioning charges @	10%			430.01
2	Use rate of 50 m air hose 4 Nos.	Hour	22.00000	12.19	268.18
3	Explosive small dia.	kg	10.50000	73.00	766.50
4	Ordinary detonators	Nos	2.00000	9.00	18.00
5	Electric delay detonators	Nos	76.00000	24.00	1824.00
6	Fuse coil	Rm	140.00000	11.00	1540.00
7	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs.	9228.77

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Shovel 0.85 cum capacity	Hour	1.00000	1751.36	1751.36
	Fuel / Energy charges	Hour	1.00000	1473.48	1473.48
2	Angle dozer 90 hp	Hour	0.25000	1651.08	412.77
	Fuel / Energy charges	Hour	0.25000	1030.76	257.69
3	Dumpers 5 cum capacity 3 Nos.	Hour	3.00000	628.34	1885.02
	Fuel / Energy charges	Hour	3.00000	675.13	2025.39
4	Air compressor 8.5 cmm (ele) 2 Nos	Hour	11.00000	172.20	1894.20
	Fuel / Energy charges	Hour	11.00000	475.86	5234.46
5	Jack hammers 4 Nos.	Hour	22.00000	19.11	420.42
	Fuel / Energy charges	Hour	22.00000	0.00	0.00
Total hire charges of Machinery				Rs.	15354.79

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Shovel	Hour	1.00000	369.20	369.20
2	Crew for Angle dozer	Hour	0.25000	369.20	92.30
3	Crew for Dumper	Hour	3.00000	354.43	1063.29
4	Crew for Air compressor	Hour	11.00000	260.33	2863.63
5	Crew for Jack hammer	Hour	22.00000	520.65	11454.30
6	work inspector	Day	0.50000	775.00	387.50
7	Blaster	Day	0.50000	780.00	390.00
8	Helper blaster	Day	0.50000	640.00	320.00
9	Crowbarman	Day	0.50000	640.00	320.00
10	Stone breaker	Day	0.50000	640.00	320.00
11	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs.	18770.22

labour component/unit qty 469.30

Add contractor's profit and overhead charges 13.615% 63.90

labour component/unit qty (including contractor's profit) **533.20****ABSTRACT:**

A. Cost of Materials	Rs:	9228.77
B. Hire charges of Machinery	Rs:	15354.79
C. Cost of Labour	Rs:	18770.22
	Rs:	43353.78
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	5902.62
Total cost for	40.00 cum	Rs: 49256.40
Rate per cum	(A+B+C+D)/40	Rs: 1231.41

IRR-DAW-1-7

Preparing **foundation bed for masonry or concrete** by benching, stepping, removing all loose material by wedging / chiselling and disposing off the same as directed and cleaning the surface with air and water jet etc. complete with **initial lead upto 50 m and all lifts.**

DATA

RATE ANALYSIS

UNIT:

100.00 sqm**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs.	0.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Air compressor 8.5 cmm (ele)	Hour	1.00000	172.20	172.20
	Fuel / Energy charges	Hour	1.00000	475.86	475.86
2	Pump 5 hp (ele)	Hour	1.00000	3.15	3.15
	Fuel / Energy charges	Hour	1.00000	42.30	42.30
Total hire charges of Machinery				Rs.	693.51

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Air compressor	Hour	1.00000	260.33	260.33
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	Stone breaker	Day	2.00000	640.00	1280.00
4	mazdoor	Day	2.50000	595.00	1487.50
5	Crowbar man	Day	2.00000	640.00	1280.00
Total cost of Labour				Rs:	4437.91

labour component/unit qty	44.40
Add contractor's profit and overhead charges	13.615% 6.00
labour component/unit qty (including contractor's profit)	50.40

ABSTRACT:

A. Cost of Materials	Rs: 0.00
B. Hire charges of Machinery	Rs: 693.51
C. Cost of Labour	Rs: 4437.91
	Rs: 5131.42
D.Add for contractor's profit and overheads on (A+B+C)	13.615% Total
Total cost for	100.00 sqm
Rate per sqm	Rs: 5830.06
	Rs: 58.30

IRR-DAW-1-8

Preparing foundation bed for cut-off trench filling in rock portion by
removing all loose materials by wedging / chiselling and disposing off the
same as directed etc., complete **with initial lead upto 50 m and all lifts.**

DATA

RATE ANALYSISUNIT:
100.00 sqm**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crowbar man	Day	2.00000	640.00	1280.00
2	Stone breaker	Day	2.00000	640.00	1280.00
3	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	3750.00

labour component/unit qty	37.50
Add contractor's profit and overhead charges	13.615% 5.10
labour component/unit qty (including contractor's profit)	42.60

ABSTRACT:

A. Cost of Materials	Rs: 0.00
B. Hire charges of Machinery	Rs: 0.00
C. Cost of Labour	Rs: 3750.00
	Rs: 3750.00
D.Add for contractor's profit and overheads on (A+B+C)	13.615% Total
Total cost for	100.00 sqm
Rate per sqm	Rs: 4260.56
	Rs: 42.61

IRR-DAW-1-9

Drilling 45 to 50 mm dia holes vertical or inclined upto 10 degrees to
vertical **in rock /masonry/ concrete by percussion drilling** using waggon
drill or any other suitable equipment including cost of all materials,
machinery, labour, redrilling through partially set grout wherever required
etc., complete.

for drilling upto 6 m depth from surface.

NOTE:

The item rate for drilling through rock / masonry / concrete includes redrilling
through partially set grout, if any, in the portion of hole already grouted.

Data

RATE ANALYSISUNIT:
96.00 Rm**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of cross bit 50 mm dia	Rm	96.00000	76.96	7388.16
2	Use rate of 50 mm dia air hose 50 m	Hour	8.00000	18.44	147.52
3	Use rate of extension rod 4.5 m	Rm	96.00000	7.11	682.56
Total cost of Materials				Rs:	8218.24

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Waggon drill	Hour	8.00000	199.88	1599.04
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
2	Air compressor 8.5 cmm (ele)	Hour	8.00000	172.20	1377.60
	Fuel / Energy charges	Hour	8.00000	475.86	3806.88
3	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	6865.52

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Waggon drill	Hour	8.00000	443.04	3544.32
2	Crew for Air compressor	Hour	8.00000	260.33	2082.64
3	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	6816.96

labour component/unit qty 71.00
 Add contractor's profit and overhead charges 13.615% 9.70
 labour component/unit qty (including contractor's profit) **80.70**

ABSTRACT:

A. Cost of Materials	Rs:	8218.24
B. Hire charges of Machinery	Rs:	6865.52
C. Cost of Labour	Rs:	6816.96
Total	Rs:	21900.72
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 2981.78
Total cost for	Rs:	24882.50
Rate per Rm	(A+B+C+D)/96	Rs: 259.19

Upto 6 m from surface				Rs: 259.19
Beyond 6 m upto 12 m from surface :				
Upto 6 m from surface	Rate per Rm			Rs: 259.19
Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @		10%		Rs: 25.92
Beyond 6 m upto 12 m from surface	Rate / Rm			Rs: 285.11
Beyond 12 m upto 18 m from surface :				
For 6 m to 12 m from surface	Rate per Rm			Rs: 285.11
Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @		10%		Rs: 28.51
Beyond 12 m upto 18 m from surface	Rate / Rm			Rs: 313.62
Beyond 18 m upto 24 m from surface				:
For 12 m to 18 m from surface	Rate per Rm			Rs: 313.62
Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @		10%		Rs: 31.36
Beyond 18 m upto 24 m from surface	Rate / Rm			Rs: 344.98
Beyond 24 m upto 30 m from surface				:
For 18 m to 24 m from surface	Rate per Rm			Rs: 344.98
Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @ :		10%		Rs 34.50
Beyond 24 m upto 30 m from surface	Rate / Rm			Rs: 379.48
Beyond 30 m upto 36 m from surface				:
For 24 m to 30 m from surface	Rate per Rm			Rs: 379.48
Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @		10%		Rs: 37.95
Beyond 30 m upto 36 m from surface	Rate / Rm			Rs: 417.43
Beyond 36 m upto 42 m from surface				:
For 30 m to 36 m from surface	Rate per Rm			Rs: 417.43
Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @		10%		Rs: 41.74
Beyond 36 m upto 42 m from surface	Rate / Rm			Rs: 459.17
Beyond 42 m upto 48 m from surface				
For 36 m to 42 m from surface	Rate per Rm			Rs: 459.17
Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @		10%		Rs: 45.92
Beyond 42 m upto 48 m from surface	Rate / Rm			Rs: 505.09

IRR-DAW-1-10

Flushing grout holes of all sizes with water and air jets alternatively for an average period of 30 minutes including water intake observations after flushing, cost of all materials, machinery, labour etc., **complete.**

DATA:

RATE ANALYSISUNIT :
192.00 Rm.**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of air hose 2 Nos x 8 hrs	Hour	16.00000	12.19	195.04
2	Use rate of water hose 2 Nos x 8 hrs	Hour	16.00000	12.38	198.08
3	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	475.12

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Air compressor 8.5 cmm (ele)	Hour	8.00000	172.20	1377.60
	Fuel / Energy charges	Hour	8.00000	475.86	3806.88
2	Pump 5 hp (ele)	Hour	8.00000	3.15	25.20
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
3	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	5630.08

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Air compressor	Hour	8.00000	260.33	2082.64
2	Crew for Pump	Hour	8.00000	130.08	1040.64
3	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	5503.28

labour component/unit qty 28.70

Add contractor's profit and overhead charges 13.615% 3.90

labour component/unit qty (including contractor's profit) **32.60****ABSTRACT:**

A. Cost of Materials	Rs:	475.12
B. Hire charges of Machinery	Rs:	5630.08
C. Cost of Labour	Rs:	5503.28
	Total	Rs: 11608.48
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 1580.49
Total cost for	Rm.	Rs: 13188.97
Rate per	Rm.	Rs: 68.69
	(A+B+C+D)/192	

IRR-DAW-1-11

(a)

Consolidation grouting with neat cement grout mix of suitable consistency under specified pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT :
1.05 tonne**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement	tonne	1.05000	4220.00	4431.00
2	Use rate of 50 m pressure hose	Hour	8.00000	12.19	97.52
3	Sundries (packer assembly etc)	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	4651.52

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Grouting equipment	Hour	8.00000	23.95	191.60
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	Pump 5 hp (ele)	Hour	2.00000	3.15	6.30
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
3	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	702.90

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Grout pump	Hour	8.00000	416.52	3332.16
2	Crew for Pump	Hour	2.00000	130.08	260.16
3	mazdoor (cement handling)	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	4782.32

labour component/unit qty 4554.60

Add contractor's profit and overhead charges 13.615% 620.10

labour component/unit qty (including contractor's profit) **5174.70****ABSTRACT:**

A. Cost of Materials	Rs:	4651.52
B. Hire charges of Machinery	Rs:	702.90
C. Cost of Labour	Rs:	4782.32
	Total	Rs: 10136.74
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 1380.12
Total cost for	1.05 tonne	Rs: 11516.86
Rate per	tonne	Rs: 10968.44
	(A+B+C+D)/1.05	

IRR-DAW-1-12

(b)

Curtain grouting with neat cement grout mix of suitable consistency under specified pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT :
1.05 tonne**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement	tonne	1.05000	4220.00	4431.00
2	Use rate of 100 m pressure hose	Hour	8.00000	24.38	195.04
3	Use rate of 400 m GI pipe	Hour	8.00000	6.36	50.88
4	Sundries (packer assembly etc)	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	4799.92

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Grouting equipment	Hour	8.00000	23.95	191.60
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	Pump 5 hp (ele)	Hour	2.00000	3.15	6.30
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
3	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	702.90

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Grout pump	Hour	8.00000	416.52	3332.16
2	Crew for Pump	Hour	2.00000	130.08	260.16
3	Pipe fitter	Day	1.00000	795.00	795.00
4	mazdoor (cement handling)	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	6172.32

labour component/unit qty 5878.40
 Add contractor's profit and overhead charges 13.615% 800.30
 labour component/unit qty (including contractor's profit) **6678.70**

ABSTRACT:

A. Cost of Materials	Rs:	4799.92
B. Hire charges of Machinery	Rs:	702.90
C. Cost of Labour	Rs:	6172.32
	Total	Rs: 11675.14
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 1589.57
Total cost for	1.05 tonne	Rs: 13264.71
Rate per tonne	(A+B+C+D)/1.05	Rs: 12633.06

IRR-DAW-1-13

Providing and **fixing 25 mm dia 3 m long cold twisted deformed steel dowel bars** with one end driven into 45 to 50 mm diameter 1.50 m deep hole drilled in bed rock and other end provided with L-bend for embedding in concrete / masonry of over flow / non-over flow blocks and other appertenant works including cost of drilling and cleaning hole, filling hole with cement mortar 1 : 1 proportion, driving anchor rod, cost of all materials, machinery, labour etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT:
25 Nos.**A. MATERIALS**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of drill bit 50 mm dia	Rm	37.50000	76.96	2886.00
2	Use rate of air hose 50 m	Hour	4.00000	18.44	73.76
3	Anchor rod 25 mm dia	kg	303.22000	59.00	17889.98
4	Cement	kg	75.00000	4.22	316.50
5	Sand (screened)	cum	0.05000	728.00	36.40
Total cost of Materials				Rs:	21202.64

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Air compressor 8.5 cmm (ele)	Hour	4.00000	172.20	688.80
	Fuel / Energy charges	Hour	4.00000	475.86	1903.44
2	Waggon drill	Hour	4.00000	199.88	799.52
	Fuel / Energy charges	Hour	4.00000	0.00	0.00
Total hire charges of Machinery				Rs:	3391.76

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Air compressor	Hour	4.00000	260.33	1041.32
2	Crew for Waggon drill	Hour	4.00000	443.04	1772.16
3	Bar bender	Day	0.50000	850.00	425.00
4	Mason Cl- II	Day	0.50000	640.00	320.00
5	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	4153.48

labour component/unit qty 166.10

Add contractor's profit and overhead charges 13.615% 22.60

labour component/unit qty (including contractor's profit) **188.70****ABSTRACT:**

A. Cost of Materials Rs: 21202.64

B. Hire charges of Machinery Rs: 3391.76

C. Cost of Labour Rs: 4153.48

Total Rs: 28747.88

D.Add for contractor's profit and overheads on (A+B+C) 13.615% Rs. 3914.02

Lead Charges for 1 Km for FA 0.05 cum @ 43.1737 Rs./Cum 2.16

Lead Charges for 1Km for Steel (including Loading and Unloading Charges) 0.30 tonne @ 279.4929 Rs./Tonne 84.75

Total cost for 25.00 Nos. Rs: **32748.81****Rate per Each (A+B+C+D)/25 Rs: 1309.95**

IRR-DAW-1-14

Providing and **fixing 25 mm dia. 2.75 m long ribbed steel anchor rods**

with one end split and driven firmly using steel wedge into 1.25 m deep 45 to 50 mm dia. hole drilled in bed rock and other end provided with L- bend for embedding in concrete / masonry for spillway and appurtenant works including drilling and cleaning hole, filling hole with thick cement slurry, driving anchor rod, cost of all materials, machinery, labour, steel wedge etc., complete with **initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT:

25.00 Nos.**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of 50 mm dia drill bit	Rm	31.25000	76.96	2405.00
2	Use rate of air hose 50 m 1 Nos.	Hour	3.00000	18.44	55.32
3	Anchor rod 25 mm dia	kg	277.92000	59.00	16397.28
4	Cement	kg	62.50000	4.22	263.75
5	Gas for splitting anchor rods	LS	5.00000	43.80	219.00
6	Steel wedges	LS	10.00000	20.00	200.00
Total cost of Materials				Rs:	19540.35

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Air compressor 8.5 cmm (ele)	Hour	3.00000	172.20	516.60
	Fuel / Energy charges	Hour	3.00000	475.86	1427.58
2	Waggon drill	Hour	3.00000	199.88	599.64
	Fuel / Energy charges	Hour	3.00000	0.00	0.00
Total hire charges of Machinery				Rs:	2543.82

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Air compressor	Hour	3.00000	260.33	780.99
2	Crew for Waggon drill	Hour	3.00000	443.04	1329.12
3	Bar bender	Day	0.50000	850.00	425.00
4	Mason Cl- II	Day	0.50000	640.00	320.00
5	Gas cutter	Day	1.00000	695.00	695.00
6	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	4740.11

labour component/unit qty 189.60

Add contractor's profit and overhead charges 13.615% 25.80

labour component/unit qty (including contractor's profit) **215.40****ABSTRACT:**

A. Cost of Materials Rs: 19540.35

B. Hire charges of Machinery Rs: 2543.82

C. Cost of Labour Rs: 4740.11

Total Rs: 26824.28

D.Add for contractor's profit and overheads on (A+B+C) 13.615% Rs. 3652.13

Lead Charges for 1Km for Steel (including Loading and Unloading Charges) 0.27792 tonne @ 279.4929 Rs./Tonne 77.68

Total cost for 25.00 Nos. Rs: **30554.09****Rate per Each (A+B+C+D)/25 Rs: 1222.16**

IRR-DAW-2

REINFORCEMENT & CEMENT CONCRETE WORKS :

IRR-DAW-2-1A

Providing, fabricating and **placing in position reinforcement steel for RCC,below 36 dia rods** overlaps and wastages wherever required, tying with 1.25 mm diameter soft annealed steel wire, including cost of all materials, machinery, labour etc., complete with **initial lead upto 1 km and all lifts.** overlaps and wastage as per NHAI-data Lap jointing considered for bars upto 36 mm diameter.

DATA:

RATE ANALYSISUNIT :
1.00 tonne**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Rein.Steel with 5 % wastage	tonne	1.05000	59000.00	61950.00
2	Binding wire 1.25 mm dia	kg	9.00000	64.00	576.00
Total cost of Materials				Rs:	62526.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Bar bender	Day	2.00000	850.00	1700.00
2	mazdoor	Day	6.84000	595.00	4069.80
Total cost of Labour					5769.80

labour component/unit qty 5769.80
 Add contractor's profit and overhead charges 13.615% 785.60
 labour component/unit qty (including contractor's profit) **6555.40**

A.MATERIAL 62526.00
 B.MACHINERY 0.00
 C. LABOUR 5769.80
 Total 68295.80
 D.Add for contractor's profit and overheads on A+B+C 13.615% 9298.47
 Lead Charges for 1Km for Steel (including Loading and Unloading Charges) 279.49 Rs/Tonne 293.46
 Total cost for 1.00 tonne **77887.73**
Rate per/ TON.=(A+B+C+D) / I **77887.73**

IRR-DAW-2-1B

Providing, fabricating and **placing in position reinforcement steel for RCC above 36 dia with welding** and wastage at 2.5%, tying with 1.25 mm diameter soft annealed steel wire, including cost of all materials, machinery, labour etc., complete with **initial lead upto 1 km and all lifts.** overlaps and wastage as per NHAI-data welding joints considered for bars above 36 mm diameter.

DATA:

RATE ANALYSISUNIT :
1.00 tonne**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Rein.Steel with 2.5 % wastage	tonne	1.02500	59000.00	60475.00
2	Welding electrodes 5 per joint and 14 joints per ton	One	70.00000	17.00	1190.00
Total cost of Materials				Rs:	61665.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	welding machine	hour	10.00000	17.29	172.90
	fuel charges	hour	10.00000	101.52	1015.20
Total hire charges of Machinery				Rs:	1188.10

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	welder	day	2.50000	695.00	1737.50
2	Bar bender	Day	2.00000	850.00	1700.00
3	mazdoor	Day	6.84000	595.00	4069.80
Total cost of Labour					7507.30

labour component/unit qty 7507.30
 Add contractor's profit and overhead charges 13.615% 1022.10
 labour component/unit qty (including contractor's profit) **8529.40**

ABSTRACT:

A. Cost of Materials		61665.00
B. Hire charges of Machinery		1188.10
C. Cost of Labour		7507.30
Total		70360.40
D.Add for contractor's profit and overheads on A+B+C	13.615%	9579.57
Lead Charges for 1Km for Steel (including Loading and Unloading Charges)	279.49 Rs/Tonne	286.48
Total cost for	1.00 tonne	80226.45
Rate per/ TON = (A+B+C+D) / I		80226.45

IRR-DAW-2-2

Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 250 kg /cum with use of super plasticiser equal to 0.4% of cement content , CA : 0.98 cum, Blending Ratio of CA -- 40:30:20:10, FA : 0.35 cum)**

DATA:

RATE ANALYSIS

UNIT:

240.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	60000.00000	4.22	253200.00
	Cement for incidentals @ 3 kg / cum	kg	720.00000	4.22	3038.40
2	Coarse aggregate 80-40 mm	cum	94.08000	786.00	73946.88
	Coarse aggregate 40-20 mm	cum	70.56000	1441.00	101676.96
	Coarse aggregate 20-10 mm	cum	47.04000	1508.00	70936.32
	Coarse aggregate 10 mm below	cum	23.52000	1098.00	25824.96
3	Fine aggregate (Un-screened)	cum	84.00000	605.00	50820.00
4	Super Plasticizer or AEA	kg	240.00000	63.00	15120.00
5	Use rate of shuttering	sqm	120.00000	472.85	56742.00
Total cost of Materials				Rs:	651305.52

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Batching plant	Hour	8.00000	606.69	4853.52
	Fuel / Energy charges	Hour	8.00000	465.28	3722.24
2	Air compressor 7 cmm (ele)	Hour	8.00000	132.59	1060.72
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
3	Tipper	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Tower crane 5 t	Hour	16.00000	865.81	13852.96
	Fuel / Energy charges	Hour	16.00000	219.95	3519.20
5	Concrete bucket	Hour	40.00000	17.47	698.80
	Fuel / Energy charges	Hour	40.00000	0.00	0.00
6	10 hp pump (ele)	Hour	8.00000	7.03	56.24
	Fuel / Energy charges	Hour	8.00000	84.60	676.80
7	Needle vibrator 60 mm dia (ele)	Hour	16.00000	8.33	133.28
	Fuel / Energy charges	Hour	16.00000	12.68	202.88
8	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	63902.88

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Air compressor	Hour	8.00000	260.33	2082.64
3	Crew for Tipper (4)	Hour	32.00000	276.90	8860.80
4	Crew for Tower crane (2)	Hour	16.00000	295.36	4725.76
5	Crew for Pump	Hour	8.00000	130.08	1040.64
6	Crew for Needle vibrator (2)	Hour	16.00000	249.86	3997.76
7	Mason Class-I	Day	4.00000	710.00	2840.00
8	Foreman	Day	2.00000	780.00	1560.00
9	mazdoor				
	for silo (cement handling)	Day	2.00000	595.00	1190.00
	for batching plant	Day	2.00000	595.00	1190.00
	for conveyor system	Day	2.00000	595.00	1190.00
	for laying & vibrating	Day	6.00000	595.00	3570.00
	for cleaning / washing / curing	Day	2.00000	595.00	1190.00
10	Labour cost for shuttering	sqm	120.00000	220.28	26433.60
Total cost of Labour				Rs:	64153.44

labour component/unit qty	267.30
Add contractor's profit and overhead charges	13.615% 36.40
labour component/unit qty (including contractor's profit)	303.70

ABSTRACT:

A. Cost of Materials				Rs:	651305.52
B. Hire charges of Machinery				Rs:	63902.88
C. Cost of Labour				Rs:	64153.44
				Rs:	779361.84
Add for conveyor system @		3.00%			23380.86
Add for electric sub-station/ Demand charges @		2.5%			19484.05
Add for trestle bridge for tower crane track @		4.0%			31174.47
				Rs:	853401.22
D.Add for contractor's profit and overheads on (A+B+C)		13.615%		Rs:	116190.58
Lead Charges for 1 Km for FA	84.00	cum @	43.17 Rs./Cum		3626.59
Lead Charges for 1 Km for CA	235.20	cum @	41.51 Rs./Cum		9764.31
Total cost for	240.00	cum		Rs:	982982.70
Rate per cum		(A+B+C+D)/240		Rs:	4095.76

IRR-DAW-2-2A
New Item1-2010-11

Providing and laying **insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for **plain concrete works** with **initial lead upto 1 km and all lifts. (Cement content : 300 kg /cum with use of 0.4% of cement content super plasticiser , CA : 0.90 cum, Blending Ratio of CA -- 40:30:20:10, FA : 0.40 cum)**

DATA:

RATE ANALYSIS

UNIT:

240.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	72000.00000	4.22	303840.00
	Cement for incidentals @ 3 kg / cum	kg	720.00000	4.22	3038.40
2	Coarse aggregate 80-40 mm	cum	86.40000	786.00	67910.40
	Coarse aggregate 40-20 mm	cum	64.80000	1441.00	93376.80
	Coarse aggregate 20-10 mm	cum	43.20000	1508.00	65145.60
	Coarse aggregate 10 mm below	cum	21.60000	1098.00	23716.80
3	Fine aggregate (Un-Screened)	cum	96.00000	605.00	58080.00
4	Super Plasticizer or AEA	kg	288.00000	63.00	18144.00
5	Use rate of shuttering	sqm	120.00000	472.85	56742.00
Total cost of Materials				Rs:	689994.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Batching plant	Hour	8.00000	606.69	4853.52
	Fuel / Energy charges	Hour	8.00000	465.28	3722.24
2	Air compressor 7 cmm (ele)	Hour	8.00000	132.59	1060.72
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
3	Tipper	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Tower crane 5 t	Hour	16.00000	865.81	13852.96
	Fuel / Energy charges	Hour	16.00000	219.95	3519.20
5	Concrete bucket	Hour	40.00000	17.47	698.80
	Fuel / Energy charges	Hour	40.00000	0.00	0.00
6	10 hp pump (ele)	Hour	8.00000	7.03	56.24
	Fuel / Energy charges	Hour	8.00000	84.60	676.80
7	Needle vibrator 60 mm dia (ele)	Hour	16.00000	8.33	133.28
	Fuel / Energy charges	Hour	16.00000	12.68	202.88
8	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	63902.88

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Air compressor	Hour	8.00000	260.33	2082.64
3	Crew for Tipper (4)	Hour	32.00000	276.90	8860.80
4	Crew for Tower crane (2)	Hour	16.00000	295.36	4725.76
5	Crew for Pump	Hour	8.00000	130.08	1040.64
6	Crew for Needle vibrator (2)	Hour	16.00000	249.86	3997.76
7	Mason Class-I	Day	4.00000	710.00	2840.00
8	Foreman	Day	2.00000	780.00	1560.00
9	mazdoor				
	for silo (cement handling)	Day	2.00000	595.00	1190.00
	for batching plant	Day	2.00000	595.00	1190.00
	for conveyor system	Day	2.00000	595.00	1190.00
	for laying & vibrating	Day	6.00000	595.00	3570.00
	for cleaning / washing / curing	Day	2.00000	595.00	1190.00
10	Labour cost for shuttering	sqm	120.00000	220.28	26433.60
Total cost of Labour				Rs:	64153.44

labour component/unit qty		267.30
Add contractor's profit and overhead charges	13.615%	36.40
labour component/unit qty (including contractor's profit)		303.70

ABSTRACT:

A. Cost of Materials				Rs:	689994.00
B. Hire charges of Machinery				Rs:	63902.88
C. Cost of Labour				Rs:	64153.44
		Total		Rs:	818050.32
Add for conveyor system @	3.00%				24541.51
Add for electric sub-station/ Demand charges @	2.5%				20451.26
Add for trestle bridge for tower crane track @	4.0%				32722.01
		Total		Rs:	895765.10
D.Add for contractor's profit and overheads on (A+B+C)	13.615%			Rs:	121958.42
Lead Charges for 1 Km for FA	96.00	cum @	43.17 Rs./Cum		4144.68
Lead Charges for 1 Km for CA	216.00	cum @	41.51 Rs./Cum		8967.22
Total cost for	240.00	cum		Rs:	1030835.42
Rate per	cum	(A+B+C+D)/240		Rs:	4295.15

IRR-DAW-2-3

Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 220 kg /cum with use of super plasticiser, CA: 0.98 cum, Blending Ratio of CA –40:30:20:10, FA: 0.37 cum)**

DATA:

RATE ANALYSIS

UNIT:

240.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	52800.00000	4.22	222816.00
	Cement for incidentals @ 3 kg / cum	kg	720.00000	4.22	3038.40
2	Coarse aggregate 80-40 mm	cum	94.08000	786.00	73946.88
	Coarse aggregate 40-20 mm	cum	70.56000	1441.00	101676.96
	Coarse aggregate 20-10 mm	cum	47.04000	1508.00	70936.32
	Coarse aggregate 10 mm below	cum	23.52000	1098.00	25824.96
3	Fine aggregate (Un-Screened)	cum	88.80000	605.00	53724.00
4	Super Plasticizer or AEA	kg	211.20000	63.00	13305.60
5	Use rate of shuttering	sqm	120.00000	472.85	56742.00
Total cost of Materials				Rs:	622011.12

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Batching plant 2 x 1.5 cum	Hour	8.00000	606.69	4853.52
	Fuel / Energy charges	Hour	8.00000	465.28	3722.24
2	Air compressor 7 cmm (ele)	Hour	8.00000	132.59	1060.72
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
3	Tipper	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Tower crane 5 t	Hour	16.00000	865.81	13852.96
	Fuel / Energy charges	Hour	16.00000	219.95	3519.20
5	Concrete bucket	Hour	40.00000	17.47	698.80
	Fuel / Energy charges	Hour	40.00000	0.00	0.00
6	10 hp pump (ele)	Hour	8.00000	7.03	56.24
	Fuel / Energy charges	Hour	8.00000	84.60	676.80
7	Needle vibrator 60 mm dia (ele)	Hour	16.00000	8.33	133.28
	Fuel / Energy charges	Hour	16.00000	12.68	202.88
8	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	63902.88

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Air compressor	Hour	8.00000	260.33	2082.64
3	Crew for Tipper (4)	Hour	32.00000	276.90	8860.80
4	Crew for Tower crane (2)	Hour	16.00000	295.36	4725.76
5	Crew for Pump	Hour	8.00000	130.08	1040.64
6	Crew for Needle vibrator (2)	Hour	16.00000	249.86	3997.76
7	Mason Class-I	Day	4.00000	710.00	2840.00
8	Foreman	Day	2.00000	780.00	1560.00
9	mazdoor				
	for silo (cement handling)	Day	2.00000	595.00	1190.00
	for batching plant	Day	2.00000	595.00	1190.00
	for conveyor system	Day	2.00000	595.00	1190.00
	for laying & vibrating	Day	6.00000	595.00	3570.00
	for cleaning / washing / curing	Day	2.00000	595.00	1190.00
10	Labour cost for shuttering	sqm	120.00000	220.28	26433.60
Total cost of Labour				Rs:	64153.44

labour component/unit qty 267.30
 Add contractor's profit and overhead charges 13.615% 36.40
 labour component/unit qty (including contractor's profit) **303.70**

ABSTRACT:

A. Cost of Materials	Rs:	622011.12
B. Hire charges of Machinery	Rs:	63902.88
C. Cost of Labour	Rs:	64153.44
	Total	Rs: 750067.44
Add for conveyor system @	3.00%	22502.02
Add for electric sub-station/ Demand charges @	2.5%	18751.69
Add for trestle bridge for tower crane track @	4.0%	30002.70
	Total	Rs: 821323.85
D. Add for contractor's profit and overheads on (A+B+C+other	13.615%	Rs: 111823.24
Lead Charges for 1 Km for FA	88.80 cum @	43.17 Rs./Cum 3833.82
Lead Charges for 1 Km for CA	235.20 cum @	41.51 Rs./Cum 9764.31
Total cost for	240.00 cum	Rs: 946745.22
Rate per cum	(A+B+C+D)/240	Rs: 3944.77

IRR-DAW-2-4

Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **for RCC works of gallery, sluice, spillway crest, spillway d / s** face, energy dissipating structures, training walls, piers, abutments and such other locations with **initial lead upto 1 km and all lifts.**
(Cement content : 310 kg / cum with use of super plasticiser,
CA : 0.90 cum, blending ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSIS

UNIT: 240.00 cum					
A. MATERIALS:					
Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	74400.00000	4.22	313968.00
2	Cement for incidentals @ 3 kg / cum	kg	720.00000	4.22	3038.40
	Coarse aggregate 40-20 mm	cum	108.00000	1441.00	155628.00
	Coarse aggregate 20-10 mm	cum	64.80000	1508.00	97718.40
	Coarse aggregate 10 mm below	cum	43.20000	1098.00	47433.60
3	Fine aggregate (Un-Screened)	cum	96.00000	605.00	58080.00
4	Super Plasticizer or AEA	kg	297.60000	63.00	18748.80
5	Use rate of shuttering	sqm	360.00000	472.85	170226.00
6	Scaffolding of shuttering @	15%			25533.90
Total cost of Materials				Rs:	890375.10

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Batching plant 2 x 1.5 cum	Hour	8.00000	606.69	4853.52
	Fuel / Energy charges	Hour	8.00000	465.28	3722.24
2	Air compressor 7 cmm (ele)	Hour	8.00000	132.59	1060.72
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
3	Tipper	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Tower crane 5 t	Hour	16.00000	865.81	13852.96
	Fuel / Energy charges	Hour	16.00000	219.95	3519.20
5	Concrete bucket	Hour	40.00000	17.47	698.80
	Fuel / Energy charges	Hour	40.00000	0.00	0.00
6	10 hp pump (ele)	Hour	8.00000	7.03	56.24
	Fuel / Energy charges	Hour	8.00000	84.60	676.80
7	Needle vibrator 60 mm dia (ele)	Hour	16.00000	8.33	133.28
	Fuel / Energy charges	Hour	16.00000	12.68	202.88
8	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	63902.88

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Air compressor	Hour	8.00000	260.33	2082.64
3	Crew for Tipper (4)	Hour	32.00000	276.90	8860.80
4	Crew for Tower crane (2)	Hour	16.00000	295.36	4725.76
5	Crew for Pump	Hour	8.00000	130.08	1040.64
6	Crew for Needle vibrator (2)	Hour	16.00000	249.86	3997.76
7	Mason Class-I	Day	4.00000	710.00	2840.00
8	Foreman	Day	2.00000	780.00	1560.00
9	mazdoor				0.00
	for silo (cement handling)	Day	2.00000	595.00	1190.00
	for batching plant	Day	2.00000	595.00	1190.00
	for conveyor system	Day	2.00000	595.00	1190.00
	for laying & vibrating	Day	6.00000	595.00	3570.00
	for cleaning / washing / curing	Day	2.00000	595.00	1190.00
10	Labour cost for shuttering	sqm	360.00000	220.28	79300.80
11	Labour cost for scaffolding @	15%			11895.12
Total cost of Labour				Rs:	128915.76

labour component/unit qty 537.10

Add contractor's profit and overhead charges 13.615% 73.10

labour component/unit qty (including contractor's profit) **610.20****ABSTRACT:**

A. Cost of Materials		Rs:	890375.10
B. Hire charges of Machinery		Rs:	63902.88
C. Cost of Labour		Rs:	128915.76
	Total	Rs:	1083193.74
Add for aggregate conveyor system @	3.0%		32495.81
Add for electric sub-station / Demand charges @	2.50%		27079.84
Add for trestle bridge for tower crane track @	4.0%		43327.75
	Total	Rs:	1186097.14
D. Add for contractor's profit and overheads on (A+B+C+other	13.615%	Rs:	161487.13
Lead Charges for 1 Km for FA	96.00 cum @	43.17 Rs./Cum	4144.68
Lead Charges for 1 Km for CA	216.00 cum @	41.51 Rs./Cum	8967.22
Total cost for	240.00 cum	Rs:	1360696.17
Rate per cum	(A+B+C+D)/240	Rs:	5669.57

IRR-DAW-2-4A
new Item2-2010-11

Providing and **laying insitu vibrated M-25** (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **RCC works of gallery, sluice, spillway crest**, spillway d / s face, energy dissipating structures, training walls, piers, abutments and such other locations **with initial lead upto 1 km and all lifts.**
(**Cement content : 360 kg / cum with use of super plasticiser, CA : 0.90 cum, blending ratio of CA--50:30:20, FA : 0.40 cum**)

DATA:

RATE ANALYSIS

UNIT:

240.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	86400.00000	4.22	364608.00
2	Cement for incidentals @ 3 kg / cum	kg	720.00000	4.22	3038.40
	Coarse aggregate 40-20 mm	cum	108.00000	1441.00	155628.00
	Coarse aggregate 20-10 mm	cum	64.80000	1508.00	97718.40
	Coarse aggregate 10 mm below	cum	43.20000	1098.00	47433.60
3	Fine aggregate (Un-Screened)	cum	96.00000	605.00	58080.00
4	Super Plasticizer or AEA	kg	345.60000	63.00	21772.80
5	Use rate of shuttering	sqm	360.00000	472.85	170226.00
6	Scaffolding of shuttering @	15%			25533.90
Total cost of Materials				Rs:	944039.10

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Batching plant 2 x 1.5 cum	Hour	8.00000	606.69	4853.52
	Fuel / Energy charges	Hour	8.00000	465.28	3722.24
2	Air compressor 7 cmm (ele)	Hour	8.00000	132.59	1060.72
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
3	Tipper	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Tower crane 5 t	Hour	16.00000	865.81	13852.96
	Fuel / Energy charges	Hour	16.00000	219.95	3519.20
5	Concrete bucket	Hour	40.00000	17.47	698.80
	Fuel / Energy charges	Hour	40.00000	0.00	0.00
6	10 hp pump (ele)	Hour	8.00000	7.03	56.24
	Fuel / Energy charges	Hour	8.00000	84.60	676.80
7	Needle vibrator 60 mm dia (ele)	Hour	16.00000	8.33	133.28
	Fuel / Energy charges	Hour	16.00000	12.68	202.88
8	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	63902.88

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Air compressor	Hour	8.00000	260.33	2082.64
3	Crew for Tipper (4)	Hour	32.00000	276.90	8860.80
4	Crew for Tower crane (2)	Hour	16.00000	295.36	4725.76
5	Crew for Pump	Hour	8.00000	130.08	1040.64
6	Crew for Needle vibrator (2)	Hour	16.00000	249.86	3997.76
7	Mason Class-I	Day	4.00000	710.00	2840.00
8	Foreman	Day	2.00000	780.00	1560.00
9	mazdoor				
	for silo (cement handling)	Day	2.00000	595.00	1190.00
	for batching plant	Day	2.00000	595.00	1190.00
	for conveyor system	Day	2.00000	595.00	1190.00
	for laying & vibrating	Day	6.00000	595.00	3570.00
	for cleaning / washing / curing	Day	2.00000	595.00	1190.00
10	Labour cost for shuttering	sqm	360.00000	220.28	79300.80
11	Labour cost for scaffolding @	15%			11895.12
Total cost of Labour				Rs:	128915.76

labour component/unit qty 537.10

Add contractor's profit and overhead charges 13.615% 73.10

labour component/unit qty (including contractor's profit) **610.20****ABSTRACT:**

A. Cost of Materials	Rs:	944039.10
B. Hire charges of Machinery	Rs:	63902.88
C. Cost of Labour	Rs:	128915.76
	Rs:	1136857.74
Add for aggregate conveyor system @	Total 3.0%	34105.73
Add for electric sub-station / Demand charges @	2.50%	28421.44
Add for trestle bridge for tower crane track @	4.0%	45474.31
	Total	Rs: 1244859.22
D. Add for contractor's profit and overheads on (A+B+C+other)	13.615%	Rs: 169487.58
Lead Charges for 1 Km for FA	96.00 cum @ 43.17 Rs./Cum	4144.68
Lead Charges for 1 Km for CA	216.00 cum @ 41.51 Rs./Cum	8967.22
Total cost for	240.00 cum	Rs: 1427458.70
Rate per cum	(A+B+C+D)/240	Rs: 5947.74

IRR-DAW-2-4B
new Item3-2010-11

Providing and **laying insitu vibrated M-25** (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for **RCC works of gallery, sluice, spillway crest, spillway d / s** face, energy dissipating structures, training walls, piers, abutments and such other locations **with initial lead upto 1 km and all lifts.**
(**Cement content : 380 kg / cum with use of super plasticiser,**
CA : 0.90 cum, blending ratio of CA--65:35, FA : 0.40 cum)

DATA:

RATE ANALYSIS

UNIT:
240.00 cum

A. MATERIALS:

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	91200.00000	4.22	384864.00
2	Cement for incidentals @ 3 kg / cum	kg	720.00000	4.22	3038.40
	Coarse aggregate 20-10 mm	cum	140.40000	1508.00	211723.20
	Coarse aggregate 10 mm below	cum	75.60000	1098.00	83008.80
3	Fine aggregate (Un-Screened)	cum	96.00000	605.00	58080.00
4	Super Plasticizer or AEA	kg	364.80000	63.00	22982.40
5	Use rate of shuttering	sqm	360.00000	472.85	170226.00
6	Scaffolding of shuttering @	15%			25533.90
Total cost of Materials				Rs:	959456.70

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Batching plant 2 x 1.5 cum	Hour	8.00000	606.69	4853.52
	Fuel / Energy charges	Hour	8.00000	465.28	3722.24
2	Air compressor 7 cmm (ele)	Hour	8.00000	132.59	1060.72
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
3	Tipper	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Tower crane 5 t	Hour	16.00000	865.81	13852.96
	Fuel / Energy charges	Hour	16.00000	219.95	3519.20
5	Concrete bucket	Hour	40.00000	17.47	698.80
	Fuel / Energy charges	Hour	40.00000	0.00	0.00
6	10 hp pump (ele)	Hour	8.00000	7.03	56.24
	Fuel / Energy charges	Hour	8.00000	84.60	676.80
7	Needle vibrator 60 mm dia (ele)	Hour	16.00000	8.33	133.28
	Fuel / Energy charges	Hour	16.00000	12.68	202.88
8	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	63902.88

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Air compressor	Hour	8.00000	260.33	2082.64
3	Crew for Tipper (4)	Hour	32.00000	276.90	8860.80
4	Crew for Tower crane (2)	Hour	16.00000	295.36	4725.76
5	Crew for Pump	Hour	8.00000	130.08	1040.64
6	Crew for Needle vibrator (2)	Hour	16.00000	249.86	3997.76
7	Mason Class-I	Day	4.00000	710.00	2840.00
8	Foreman	Day	2.00000	780.00	1560.00
9	mazdoor				
	for silo (cement handling)	Day	2.00000	595.00	1190.00
	for batching plant	Day	2.00000	595.00	1190.00
	for conveyor system	Day	2.00000	595.00	1190.00
	for laying & vibrating	Day	6.00000	595.00	3570.00
	for cleaning / washing / curing	Day	2.00000	595.00	1190.00
10	Labour cost for shuttering	sqm	360.00000	220.28	79300.80
11	Labour cost for scaffolding @	15%			11895.12
Total cost of Labour				Rs:	128915.76

labour component/unit qty 537.10
Add contractor's profit and overhead charges 13.615% 73.10
labour component/unit qty (including contractor's profit) **610.20**

ABSTRACT:

A. Cost of Materials				Rs:	959456.70
B. Hire charges of Machinery				Rs:	63902.88
C. Cost of Labour				Rs:	128915.76
				Rs:	1152275.34
Add for aggregate conveyor system @			Total		3.0%
Add for electric sub-station / Demand charges @			2.50%		28806.88
Add for trestle bridge for tower crane track @			4.0%		46091.01
			Total	Rs:	1261741.49
D. Add for contractor's profit and overheads on (A+B+C+other			13.615%	Rs:	171786.1
Lead Charges for 1 Km for FA	96.00	cum @	43.17 Rs./Cum		4144.68
Lead Charges for 1 Km for CA	216.00	cum @	41.51 Rs./Cum		8967.22
Total cost for	240.00	cum		Rs:	1446639.49
Rate per cum		(A+B+C+D)/240		Rs:	6027.66

IRR-DAW-2-5

Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 260 kg / cum with use of super plasticiser, CA : 0.90 cum, Blending Ratio of CA -- 50:30:20, FA : 0.40 cum)**

DATA:

RATE ANALYSISUNIT :
14.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	3640.00000	4.22	15360.80
	Cement for incidentals @ 3 kg	kg	42.00000	4.22	177.24
2	Coarse aggregate 40-20 mm	cum	6.30000	1441.00	9078.30
	Coarse aggregate 20-10 mm	cum	3.78000	1508.00	5700.24
	Coarse aggregate 10 mm below	cum	2.52000	1098.00	2766.96
3	Fine aggregate (Un-Screened)	cum	5.60000	605.00	3388.00
4	Super plasticizer	kg	14.56000	63.00	917.28
5	Use rate of shuttering	sqm	14.00000	315.23	4413.22
6	Use rate of scaffolding @	15%			661.98
Total cost of Materials				Rs:	42464.02

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
3	Needle vibrator 40 mm dia (ele)	Hour	8.00000	8.01	64.08
	Fuel / Energy charges	Hour	8.00000	8.46	67.68
Total hire charges of Machinery				Rs:	989.15

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	mazdoor				
	for batching cement (cement handling	Day	2.00000	595.00	1190.00
	for batching other materials	Day	9.00000	595.00	5355.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	14.00000	595.00	8330.00
	for cleaning / washing / curing	Day	1.00000	595.00	595.00
6	Labour cost of shuttering	sqm	14.00000	146.85	2055.90
7	Labour cost of scaffolding @	15%			308.39
Total cost of Labour				Rs:	27615.05

labour component/unit qty	1972.50
Add contractor's profit and overhead charges	13.615% 268.60
labour component/unit qty (including contractor's profit)	2241.10

ABSTRACT:

A. Cost of Materials				Rs:	42464.02
B. Hire charges of Machinery				Rs:	989.15
C. Cost of Labour				Rs:	27615.05
				Rs:	71068.22
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	9675.94
Lead Charges for 1 Km for FA	5.60	cum @	43.17 Rs./Cum		241.77
Lead Charges for 1 Km for CA	12.60	cum @	41.51 Rs./Cum		523.09
Total cost for	14.00	cum		Rs:	81509.02
Rate per cum		(A+B+C+D)/14		Rs:	5822.07

IRR-DAW-2-6

Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **with placing and sinking plums of size 150 to 80 mm upto 15 percent for gravity type structures** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 1 km and all lifts. (Cement content : 260 kg / cum of concrete with use of plums and super plasticiser of 0.4% of cement quantity, CA : 0.77 cum, Blending Ratio of CA : 50:30:20, FA : 0.34 cum, plums of size 150 to 80 mm : 0.25 cum)**

DATA:

RATE ANALYSIS

A. MATERIALS:			UNIT: 16.45 cum		
Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	4277.00000	4.22	18048.94
	Cement for incidentals @ 3 kg / cum	kg	49.35000	4.22	208.26
2	Coarse aggregate 40-20 mm	cum	6.33000	1441.00	9121.53
	Coarse aggregate 20-10 mm	cum	3.80000	1508.00	5730.40
	Coarse aggregate 10 mm below	cum	2.53000	1098.00	2777.94
3	Plums of size 150 to 80 mm	cum	4.11250	466.00	1916.43
4	Fine aggregate (Un-Screened)	cum	5.59300	605.00	3383.77
5	Super Plasticizer	kg	17.10800	63.00	1077.80
6	Use rate of shuttering for 40 uses	sqm	16.45000	315.23	5185.53
7	Scaffolding of shuttering @	15%			777.83
Total cost of Materials				Rs:	48228.43

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
3	Needle vibrator 60 mm dia (ele)	Hour	8.00000	8.33	66.64
	Fuel / Energy charges	Hour	8.00000	12.68	101.44
Total hire charges of Machinery				Rs:	1025.47

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching cement (cement handling	Day	2.00000	595.00	1190.00
	for batching other materials	Day	9.00000	595.00	5355.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for loading plums	Day	1.00000	595.00	595.00
	for laying concrete and plums	Day	4.00000	595.00	2380.00
	for conveying concrete	Day	13.98601	595.00	8321.68
	for conveying plums	Day	3.00000	595.00	1785.00
	for cleaning / washing / curing	Day	1.00000	595.00	595.00
7	Labour for shuttering	sqm	16.45000	146.85	2415.68
8	Labour for scaffolding @	15%			362.35
Total cost of Labour				Rs:	31770.47

labour component/unit qty	1931.30
Add contractor's profit and overhead charges	13.615% 262.90
labour component/unit qty (including contractor's profit)	2194.20

ABSTRACT:

A. Cost of Materials				Rs:	48228.43
B. Hire charges of Machinery				Rs:	1025.47
C. Cost of Labour				Rs:	31770.47
				Rs:	81024.37
D. Add for contractor's profit and overheads on (A+B+C)			Total	Rs:	11031.47
			13.615%		
Lead Charges for 1 Km for FA	5.59	cum @	43.17 Rs./Cum		241.47
Lead Charges for 1 Km for CA and Plums	16.77	cum @	41.51 Rs./Cum		696.31
Total cost for	16.45	cum		Rs:	92993.62
Rate per cum		(A+B+C+D)/16.45		Rs:	5653.11

IRR-DAW-2-7

Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **plain concrete works with initial lead upto 1 km and all lifts. (Cement content 220 kg / cum with use of super plasticiser, CA : 0.90 cum, Blending Ratio of CA : 50:30:20, FA : 0.40 cum)**

DATA:

RATE ANALYSISUNIT:
16.53 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	3636.60000	4.22	15346.45
	Cement for incidentals @ 3 kg/ cum	kg	49.59000	4.22	209.27
2	Coarse aggregate 40-20 mm	cum	7.43850	1441.00	10718.88
	Coarse aggregate 20-10 mm	cum	4.46310	1508.00	6730.35
	Coarse aggregate 10 mm below	cum	2.97540	1098.00	3266.99
3	Fine aggregate (Un-Screened)	cum	6.61200	605.00	4000.26
4	Super plasticizer	kg	14.54640	63.00	916.42
5	Use rate of shuttering	sqm	16.53000	315.23	5210.75
6	Use rate of scaffolding @	15%			781.61
Total cost of Materials				Rs:	47180.98

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
3	Needle vibrator 40 mm dia (ele)	Hour	8.00000	8.01	64.08
	Fuel / Energy charges	Hour	8.00000	8.46	67.68
Total hire charges of Machinery				Rs:	989.15

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	mazdoor				
	for batching cement (cement handling	Day	2.00000	595.00	1190.00
	for batching other materials	Day	9.00000	595.00	5355.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	16.53000	595.00	9835.35
	for cleaning / washing / curing	Day	1.00000	595.00	595.00
6	Labour cost of shuttering	sqm	16.53000	146.85	2427.43
7	Labour cost of scaffolding @	15%			364.11
Total cost of Labour				Rs:	29547.65

labour component/unit qty 1787.50

Add contractor's profit and overhead charges 13.615% 243.40

labour component/unit qty (including contractor's profit) **2030.90**

ABSTRACT:

A. Cost of Materials					Rs:	47180.98
B. Hire charges of Machinery					Rs:	989.15
C. Cost of Labour					Rs:	29547.65
					Rs:	77717.78
					Rs:	10581.28
D.Add for contractor's profit and overheads on (A+B+C)			13.615%			
Lead Charges for 1 Km for FA	6.61	cum @		43.17 Rs./Cum		285.46
Lead Charges for 1 Km for CA	14.88	cum @		41.51 Rs./Cum		617.62
Total cost for	16.53		cum		Rs:	89202.14
Rate per cum			(A+B+C+D)/16.53		Rs:	5396.38

IRR-DAW-2-8

Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete **for plain concrete works with initial lead upto 1 km and all lifts.** (**Cement content : 280 kg / cum with use of super plasticiser, CA : 0.80 cum, Blending Ratio of CA -- 65:35, FA : 0.44 cum**)

DATA:

RATE ANALYSISUNIT:
15.87 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	4443.60000	4.22	18751.99
	Cement for incidentals @ 3 kg/ cum	kg	47.61000	4.22	200.91
2	Coarse aggregate 20-10 mm	cum	8.25240	1508.00	12444.62
	Coarse aggregate 10 mm below	cum	4.44360	1098.00	4879.07
3	Fine aggregate (Un-Screened)	cum	6.98280	605.00	4224.59
4	Super plasticiser	kg	17.77440	63.00	1119.79
5	Use rate of shuttering	sqm	15.87000	315.23	5002.70
6	Use rate of scaffolding @	15%			750.41
Total cost of Materials				Rs:	47374.08

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
3	Needle vibrator 40 mm dia (ele)	Hour	8.00000	8.01	64.08
	Fuel / Energy charges	Hour	8.00000	8.46	67.68
Total hire charges of Machinery				Rs:	989.15

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	mazdoor				
	for batching cement (cement handling	Day	2.00000	595.00	1190.00
	for batching other materials	Day	9.00000	595.00	5355.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	15.87000	595.00	9442.65
	for cleaning / washing / curing	Day	1.00000	595.00	595.00
6	Labour cost of shuttering	sqm	15.87000	146.85	2330.51
7	Labour cost of scaffolding @	15%			349.58
Total cost of Labour				Rs:	29043.50

labour component/unit qty 1830.10

Add contractor's profit and overhead charges 13.615% 249.20

labour component/unit qty (including contractor's profit) **2079.30****ABSTRACT:**

A. Cost of Materials					Rs:	47374.08
B. Hire charges of Machinery					Rs:	989.15
C. Cost of Labour					Rs:	29043.50
					Rs:	77406.73
					Rs:	10538.93
D.Add for contractor's profit and overheads on (A+B+C)			13.615%			
Lead Charges for 1 Km for FA	6.98	cum @		43.17 Rs./Cum		301.47
Lead Charges for 1 Km for CA	12.70	cum @		41.51 Rs./Cum		527.07
Total cost for	15.87		cum		Rs:	88774.20
Rate per cum			(A+B+C+D)/15.87		Rs:	5593.84

IRR-DAW-2-9

Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm** down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **RCC works of spillway bridge, blockouts** and such other similar structures with congested reinforcement **with initial lead upto 1 km and all lifts. (Cement content : 330 kg / cum with use of super plasticiser, CA : 0.80 cum, Blending Ratio of CA -- 65:35, FA : 0.44 cum)**

DATA:

RATE ANALYSISUNIT:
13.47 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	4445.10000	4.22	18758.32
	Cement for incidentals @ 3 kg/ cum	kg	40.41000	4.22	170.53
2	Coarse aggregate 20-10 mm	cum	7.00440	1508.00	10562.64
	Coarse aggregate 10 mm below	cum	3.77160	1098.00	4141.22
3	Fine aggregate (Un-Screened)	cum	5.92680	605.00	3585.71
4	Super plasticiser	ltr	17.78040	63.00	1120.17
5	Use rate of shuttering	sqm	33.67500	315.23	10615.37
6	Scaffolding of shuttering @	100%			10615.37
Total cost of Materials				Rs:	59569.33

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
3	Needle vibrator 40 mm dia (ele)	Hour	8.00000	8.01	64.08
	Fuel / Energy charges	Hour	8.00000	8.46	67.68
Total hire charges of Machinery				Rs:	989.15

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
	mazdoor				
	for batching cement (cement handling)	Day	2.00000	595.00	1190.00
	for batching other materials	Day	9.00000	595.00	5355.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	13.47000	595.00	8014.65
5	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
6	Labour cost of shuttering	sqm	33.67500	146.85	4945.17
7	Labour cost of scaffolding @	100%			4945.17
Total cost of Labour				Rs:	34825.75

labour component/unit qty 2585.40
 Add contractor's profit and overhead charges 13.615% 352.00
 labour component/unit qty (including contractor's profit) **2937.40**

ABSTRACT:

A. Cost of Materials			Rs:	59569.33
B. Hire charges of Machinery			Rs:	989.15
C. Cost of Labour			Rs:	34825.75
	Total		Rs:	95384.23
D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	12986.56
Lead Charges for 1 Km for FA	5.93 cum @	43.17 Rs./Cum		255.88
Lead Charges for 1 Km for CA	10.78 cum @	41.51 Rs./Cum		447.36
Total cost for	13.47 cum		Rs:	109074.03
Rate per cum	(A+B+C+D)/13.47		Rs:	8097.55

IRR-DAW-2-10

Providing and **forming porous concrete body drain of size 68.5 x 68.5 cm** with 23 cm diameter central hole using cement and 20 mm down approved, clean, hard, graded coarse aggregates in 1 : 3.50 proportion by volume including cost of all materials, machinery, labour, formwork, curing etc., complete **with initial lead upto 1 km and all lifts.**
(M15 Cement content : 400kg/cum, CA : 1cum, Blending Ratio of CA -- 65:35)

DATA:

RATE ANALYSIS

UNIT:
20.00 Rm

A. MATERIALS:

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement	kg	3424.00000	4.22	14449.28
2	Coarse aggregate 20-10 mm	cum	5.56400	1508.00	8390.51
3	Coarse aggregate 10-4.75 mm	cum	2.99600	1098.00	3289.61
4	Use rate of shuttering	sqm	76.00000	82.81	6293.56
Total cost of Materials				Rs:	32422.96

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	0.50000	7.03	3.52
	Fuel / Energy charges	Hour	0.50000	84.60	42.30
Total hire charges of Machinery				Rs:	811.58

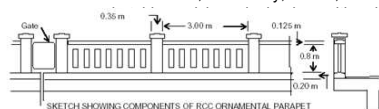
C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	130.08	65.04
3	Mason Class-I	Day	1.00000	710.00	710.00
4	mazdoor				
	for batching cement (cement handling	Day	2.00000	595.00	1190.00
	for batching other materials	Day	6.00000	595.00	3570.00
	for loading mortar pans	Day	2.00000	595.00	1190.00
	for laying & packing concrete	Day	2.00000	595.00	1190.00
	for conveying concrete	Day	8.56000	595.00	5093.20
5	Fitter shuttering	Day	3.00000	640.00	1920.00
Total cost of Labour				Rs:	17705.04

labour component/unit qty 885.30
 Add contractor's profit and overhead charges 13.615% 120.50
 labour component/unit qty (including contractor's profit) 1005.80

ABSTRACT:

A. Cost of Materials				Rs:	32422.96
B. Hire charges of Machinery				Rs:	811.58
C. Cost of Labour				Rs:	17705.04
	Total			Rs:	50939.58
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	6935.42
Lead Charges for 1 Km for CA	8.56	cum @		Rs:	355.37
Total cost for	20.00	Rm	41.51 Rs./Cum	Rs:	58230.37
Rate per Rm	(A+B+C+D)/20			Rs:	2911.52

IRR-DAW-2-11
(a)

Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, curing, vibrating, finishing, curing

ig of 35 cm x 20 cm kerb,
 nately at 3.35 m c / c, 12.5 cm
 id 35 cm wide coping slab for
 g for pillars with top edges of
 rected etc., **complete**
 (excluding cost of providing and placing reinforcement steel and gate)
 with initial lead upto 1 km and all lifts.
 (Cement content 350 kg / cum with use of super plasticiser(0.4% by wt.
 of cement), CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.44 cum)

DATA:

RATE ANALYSIS

UNIT:

36.00 Rm**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement mix	kg	3034.50000	4.22	12805.59
	Cement for incidentals @ 5 kg / cum	kg	43.35000	4.22	182.94
2	Coarse aggregate 20-10 mm	cum	4.51000	1508.00	6801.08
	Coarse aggregate 10-4.75 mm	cum	2.43000	1098.00	2668.14
3	Fine aggregate (Un-Screened)	cum	3.81000	605.00	2305.05
4	Super plasticiser	kg	12.74490	63.00	802.93
5	Use rate of shuttering	sqm	95.00000	315.23	29946.85
6	Scaffolding of shuttering @	15%			4492.03
7	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	60086.61

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	Needle vibrator 40 mm (ele)	Hour	8.00000	8.01	64.08
	Fuel / Energy charges	Hour	8.00000	8.46	67.68
3	10 hp pump (ele)	Hour	0.50000	7.03	3.52
	Fuel / Energy charges	Hour	0.50000	84.60	42.30
Total hire charges of Machinery				Rs:	943.34

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	130.08	65.04
3	Crew for Vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	2.00000	710.00	1420.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching cement (cement handling)	Day	2.00000	595.00	1190.00
	for batching other materials	Day	9.00000	595.00	5355.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying & packing concrete	Day	2.00000	595.00	1190.00
	for conveying concrete	Day	8.67000	595.00	5158.65
	for curing & miscellaneous	Day	2.00000	595.00	1190.00
7	Labour for shuttering	sqm	95.00000	146.85	13950.75
8	Labour for scaffolding @	15%			2092.61
Total cost of Labour				Rs:	39542.73

labour component/unit qty 1098.40

Add contractor's profit and overhead charges 13.615% 149.50

labour component/unit qty (including contractor's profit) **1247.90****ABSTRACT:**

A. Cost of Materials

Rs: 60086.61

B. Hire charges of Machinery

Rs: 943.34

C. Cost of Labour

Rs: 39542.73

Total

Rs: 100572.68

D.Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 13692.97

Lead Charges for 1 Km for FA

3.81

cum @

43.17 Rs./Cum

Rs: 164.49

Lead Charges for 1 Km for CA

6.94

cum @

41.51 Rs./Cum

Rs: 288.11

Total cost for

36.00

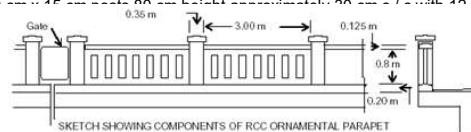
Rm

Rs: **114718.25****Rate per****Rm**

(A+B+C+D)/36

Rs: **3186.62**IRR-DAW-2-12
(b)

Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **RCC ornamental parapet consisting of 35 cm x 20 cm kerb, 35 cm x 35 cm x 1 m pillars spaced approximately at 3.5 m apart, 20 cm x 45 cm posts 20 cm height approximately 20 cm x 45 cm with 40 cm**



with

DATA:

Consider one opening large span of 10 m.

Consider solid parapet for rate analysis for one span.

Consider 0.9 wide opening for approach to pier top hoist platform on d / s side.

DATA:

RATE ANALYSISUNIT:
36.00 Rm**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement mix	kg	2450.00000	4.22	10339.00
	Cement for incidentals @ 5 kg / cum	kg	35.00000	4.22	147.70
2	Coarse aggregate 20-10 mm	cum	3.64000	1508.00	5489.12
	Coarse aggregate 10-4.75 mm	cum	1.96000	1098.00	2152.08
3	Fine aggregate (Un-Screened)	cum	3.08000	605.00	1863.40
4	Super plasticiser	kg	9.80000	63.00	617.40
5	Use rate of shuttering	sqm	115.00000	315.23	36251.45
6	Scaffolding of shuttering @	15%			5437.72
7	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	62379.87

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	Needle vibrator 40 mm (ele)	Hour	8.00000	8.01	64.08
	Fuel / Energy charges	Hour	8.00000	8.46	67.68
3	10 hp pump (ele)	Hour	0.50000	7.03	3.52
	Fuel / Energy charges	Hour	0.50000	84.60	42.30
Total hire charges of Machinery				Rs:	943.34

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	130.08	65.04
3	Crew for Vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	2.00000	710.00	1420.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching cement (cement handling)	Day	2.00000	595.00	1190.00
	for batching other materials	Day	9.00000	595.00	5355.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying & packing concrete	Day	2.00000	595.00	1190.00
	for conveying concrete	Day	7.00000	595.00	4165.00
	for curing & miscellaneous	Day	2.00000	595.00	1190.00
7	Labour for shuttering	sqm	115.00000	146.85	16887.75
8	Labour for scaffolding @	15%			2533.16
Total cost of Labour				Rs:	41926.63

labour component/unit qty 1164.60

Add contractor's profit and overhead charges 13.615% 158.60

labour component/unit qty (including contractor's profit) **1323.20****ABSTRACT:**

A. Cost of Materials				Rs:	62379.87
B. Hire charges of Machinery				Rs:	943.34
C. Cost of Labour				Rs:	41926.63
				Rs:	105249.84
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	14329.77
Lead Charges for 1 Km for FA	3.08	cum @	43.17 Rs./Cum		132.97
Lead Charges for 1 Km for CA	5.60	cum @	41.51 Rs./Cum		232.48
Total cost for	36.00			Rs:	119945.06
Rate per	Rm	(A+B+C+D)/36	Rm	Rs:	3331.81

IRR-DAW-2-13

Providing and **laying insitu M- 25** (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates for wearing coat including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position in alternate panels, levelling, compacting, finishing, curing, packing joints with asphalt mortar etc., **complete with initial lead upto 1 km and all lifts.**
(Cement content : 380 kg / cum with use of super plasticiser(0.4% by wt. of cement, CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT:
11.70 cum**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mix	kg	4446.00000	4.22	18762.12
	Cement for incidentals @ 5 kg / cum	kg	58.50000	4.22	246.87
2	Coarse aggregate 20-10 mm	cum	6.08400	1508.00	9174.67
	Coarse aggregate 10 mm below	cum	3.27600	1098.00	3597.05
3	Fine aggregate (Un-Screened)	cum	5.26500	605.00	3185.33
4	Super Plasticizer	kg	17.78400	63.00	1120.39
5	Use rate of shuttering	sqm	5.85000	315.23	1844.10
6	Sundries (asphalt mortar etc)	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	38135.53

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300/200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	0.50000	7.03	3.52
	Fuel / Energy charges	Hour	0.50000	84.60	42.30
Total hire charges of Machinery				Rs:	811.58

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	130.08	65.04
3	Mason Class-I	Day	3.00000	710.00	2130.00
4	work inspector	Day	1.00000	775.00	775.00
5	mazdoor				
	for batching cement (cement handling)	Day	2.00000	595.00	1190.00
	for batching materials	Day	9.00000	595.00	5355.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying & compacting	Day	5.00000	595.00	2975.00
	for conveying concrete	Day	11.70000	595.00	6961.50
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
6	Labour cost for shuttering	sqm	5.85000	146.85	859.07
Total cost of Labour				Rs:	26062.41

labour component/unit qty	2227.60
Add contractor's profit and overhead charges	13.615% 303.30
labour component/unit qty (including contractor's profit)	2530.90

ABSTRACT:

A. Cost of Materials		Rs:	38135.53
B. Hire charges of Machinery		Rs:	811.58
C. Cost of Labour		Rs:	26062.41
	Total	Rs:	65009.52
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	8851.05
Lead Charges for 1 Km for FA	5.27 cum @	43.17 Rs./Cum	227.31
Lead Charges for 1 Km for CA	9.36 cum @	41.51 Rs./Cum	388.58
Total cost for	11.70 cum	Rs:	74476.46
Rate per cum	(A+B+C+D)/11.70	Rs:	6365.51

IRR-DAW-2-14

Pre-cooling to control placement temperature of cement concrete in the range of 18 to 21 C at the concrete placement point by inundation of coarse aggregates and adding flaked ice as part of mixing water including cost of all materials, machinery, labour etc., **complete with all leads and lifts.**

DATA:

RATE ANALYSISUNIT:
500 cum**A. MATERIALS:**

SI No			Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sundries (amonia gas etc)	LS		3.00000	41.00	123.00	
				0.00000	0.00	0.00	
Total cost of Materials						Rs:	123.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Ice maker unit consisting of:	Hour	24.00000	185.82	4459.68
	Compressor 125 hp - 1 No				
	Condenser with 30 hp motor - 1 No.				
	Ice makers 10 t / day each - 3 Nos.				
	Pump 2 hp for ice cutting - 3 Nos.				
	Pump 2 hp for pumping water-3 Nos.				
	Screw conveyor with 15 hp motor -1				
	Ice elevator with 5 hp motor - 1 No.				
2	Fuel / Energy charges for system	Hour	24.00000	1205.50	28932.00
Total hire charges of Machinery				Rs:	33391.68

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Ice maker unit	Hour	24.00000	208.26	4998.24
2	mazdoor				
	for Ice chamber (2 x 3)	Day	6.00000	595.00	3570.00
	for miscellaneous works (1 x 3)	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	10353.24

labour component/unit qty 20.70
 Add contractor's profit and overhead charges 13.615% 2.80
 labour component/unit qty (including contractor's profit) **23.50**

ABSTRACT:

A. Cost of Materials	Rs:	123.00
B. Hire charges of Machinery	Rs:	33391.68
C. Cost of Labour	Rs:	10353.24
	Rs:	43867.92
	Rs:	5972.62
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	
Total cost for	500.00 cum	Rs: 49840.54
Rate per cum	(A+B+C+D)/500	Rs: 99.68

IRR-DAW-2-15

Conveying and **fixing elastomeric bearing for spillway bridge** including cleaning and preparing surface, mixing and applying adhesive, fixing bearing in correct position etc., including cost of all materials except bearings, machinery, labour etc., complete **with all leads and lifts.**

DATA:

RATE ANALYSIS

UNIT:

6.00 Nos.**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Synthetic adhesive (Resin + Hardener)	kg	0.60000	378.00	226.80
2	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	308.80

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Marker / Erector	Day	1.00000	850.00	850.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	2815.00

labour component/unit qty 469.20
 Add contractor's profit and overhead charges 13.615% 63.90
 labour component/unit qty (including contractor's profit) **533.10**

ABSTRACT:

A. Cost of Materials	Rs:	308.80
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	2815.00
	Rs:	3123.80
	Rs:	425.31
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	
Total cost for	6.00 Nos.	Rs: 3549.11
Rate per Each	(A+B+C+D)/6	Rs: 591.52

IRR-DAW-2-16

Providing and **constructing 150 mm dia hume pipe weep holes for concrete / masonry walls** including providing 20 x 20 x 20 cm size porous concrete block made of cement and 20 mm down coarse aggregate in 1 : 4 proportion including 10 cm thick sand backing at the junction of wall and soil back fill, cost of all materials, machinery, labour etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT:
3.00 Rm**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	150 mm dia hume pipe	Rm	2.90000	316.00	916.40
2	Cement	kg	3.00000	4.22	12.66
3	20 - 10 mm coarse aggregate	cum	0.00800	1508.00	12.06
4	Sand for filling	cum	0.02000	460.00	9.20
Total cost of Materials				Rs:	950.32

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Mason Class-II	Day	0.25000	640.00	160.00
2	mazdoor	Day	0.25000	595.00	148.75
Total cost of Labour				Rs:	308.75

labour component/unit qty 102.90
 Add contractor's profit and overhead charges 13.615% 14.00
 labour component/unit qty (including contractor's profit) **116.90**

ABSTRACT:

A. Cost of Materials	Rs:	950.32
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	308.75
Total	Rs:	1259.07
D. Add for contractor's profit and overheads on (A+B+C)	Rs:	171.42
Lead Charges for 1 Km for FA	0.02 cum @ 43.17 Rs./Cum	0.863474
Lead Charges for 1 Km for CA	0.01 cum @ 41.51 Rs./Cum	0.33
Total cost for	3.00 Rm	Rs: 1431.69
Rate per Rm	(A+B+C+D)/3	Rs: 477.20

IRR-DAW-2-17

Providing and **forming expansion joint for spillway bridge** consisting of 75 x 75 x 6 mm angles 2 numbers provided with 25 cm long 12 mm dia. anchors fixed to both flanges at 15 cm c/c and 140 x 6 mm plate welded on top of one of the angle including cost of all materials, machinery, labour, providing and fixing 38 mm thick joint filler board matching the thickness of wearing coat, painting etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT:
7.50 Rm**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Structural steel plate	kg	50.70000	66.00	3346.20
2	Structural steel angle	kg	104.50000	60.00	6270.00
3	12 dia steel anchors	kg	27.40000	59.00	1616.60
4	Welding electrodes	Nos	70.00000	17.00	1190.00
5	Joint filler board 19 mm thick	sqm	1.00000	670.00	670.00
6	Sundries (cutting gas / paint etc)	LS	1.50000	41.00	61.50
Total cost of Materials				Rs:	13154.30

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Welding set	Hour	8.00000	17.29	138.32
	Fuel / Energy charges	Hour	8.00000	101.52	812.16
2	Sundries (cutting torch/ welding guns etc)	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	1032.48

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Marker / Fabricator / Erector	Day	1.50000	850.00	1275.00
2	Gas cutter / Welder	Day	1.50000	695.00	1042.50
3	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	3507.50

labour component/unit qty	467.70
Add contractor's profit and overhead charges	13.615% 63.70
labour component/unit qty (including contractor's profit)	531.40

ABSTRACT:

A. Cost of Materials	Rs:	13154.30
B. Hire charges of Machinery	Rs:	1032.48
C. Cost of Labour	Rs:	3507.50
	Rs:	17694.28

D. Add for contractor's profit and overheads on (A+B+C)	Total 13.615%	Rs:	2409.08

Lead Charges for 1Km for Steel (including Loading and Unloading Charges)	0.18	tonne @	279.49 Rs./Tonne	51.04

Total cost for	7.50	Rm	Rs:	20154.40
Rate per	Rm	(A+B+C+D)/7.50	Rs:	2687.25

IRR_DAW-3

MASONRY & GUNITING WORKS :

IRR-DAW-3-1

Providing and **constructing un-coursed rubble stone masonry** using approved stones **in cement mortar 1 : 3** proportion including cost of all materials, machinery, labour, scaffolding, cleaning, packing mortar, wedging stone chips, curing etc., complete **with initial lead upto 1 km and all lifts.**

(Cement content : 190 kg/cum of masonry, rubble stones : 0.85 cum, stone chips : 0.15 cum/cum, FA : 0.4 cum)

DATA:

RATE ANALYSISUNIT:
25.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mortar	kg	4750.00000	4.22	20045.00
2	Rubble stones	cum	21.25000	395.00	8393.75
3	Stone chips	cum	3.75000	466.00	1747.50
4	Sand (Screened)	cum	10.00000	728.00	7280.00
Total cost of Materials				Rs:	37466.25

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
Total hire charges of Machinery				Rs:	857.39

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	work inspector	Day	1.00000	775.00	775.00
4	Mason Class-I	Day	2.50000	710.00	1775.00
5	Mason Class-II	Day	4.00000	640.00	2560.00
6	Chavali	Day	16.00000	640.00	10240.00
7	mazdoor				
	for batching cement (cement handling)	Day	2.00000	595.00	1190.00
	for batching sand	Day	6.00000	595.00	3570.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying & packing mortar	Day	10.00000	595.00	5950.00
	for loading chips	Day	1.00000	595.00	595.00
	for washing rubble / finishing / curing	Day	4.00000	595.00	2380.00
	for conveying mortar / chips	Day	12.00000	595.00	7140.00
Total cost of Labour				Rs:	41461.88

labour component/unit qty	1658.50
Add contractor's profit and overhead charges	13.615% 225.80
labour component/unit qty (including contractor's profit)	1884.30

ABSTRACT:

A. Cost of Materials				Rs:	37466.25
B. Hire charges of Machinery				Rs:	857.39
C. Cost of Labour				Rs:	41461.88
				Rs:	79785.52
D.Add for contractor's profit and overheads on (A+B+C)		13.615%		Rs:	10862.8
Lead Charges for 1 Km for FA	10.00	cum @	43.17 Rs./Cum		431.74
Lead Charges for 1 Km for Stones/Stone Chips	25.00	cum @	41.51 Rs./Cum		1037.87
Total cost for	25.00	cum		Rs:	92117.93
Rate per cum		(A+B+C+D)/25		Rs:	3684.72

IRR-DAW-3-2

Providing and constructing **un-coursed rubble stone masonry** using approved stones in **cement mortar 1 : 4** proportion including cost of all materials, machinery, labour, scaffolding, cleaning, packing mortar, wedging stone chips, curing etc., complete **with initial lead upto 1 km and all lifts.**
(Cement content : 143 kg/cum of masonry, rubble stones : 0.85 cum, stone chips : 0.15 cum/cum, FA : 0.4 cum)
 For 1 cum masonry :-

DATA:

RATE ANALYSIS

UNIT:

25.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mortar	kg	3575.00000	4.22	15086.50
2	Rubble stones	cum	21.25000	395.00	8393.75
3	Stone chips	cum	3.75000	466.00	1747.50
4	Sand (Screened)	cum	10.00000	728.00	7280.00
Total cost of Materials				Rs:	32507.75

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr(ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
Total hire charges of Machinery				Rs:	857.39

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	work inspector	Day	1.00000	775.00	775.00
4	Mason Class-I	Day	2.50000	710.00	1775.00
5	Mason Class-II	Day	4.00000	640.00	2560.00
6	Chavali	Day	16.00000	640.00	10240.00
7	mazdoor				
	for batching cement (cement handling)	Day	2.00000	595.00	1190.00
	for batching sand	Day	6.00000	595.00	3570.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying & packing mortar	Day	10.00000	595.00	5950.00
	for loading chips	Day	1.00000	595.00	595.00
	for washing rubble / finishing / curing	Day	4.00000	595.00	2380.00
	for conveying mortar / chips	Day	12.00000	595.00	7140.00
Total cost of Labour				Rs:	41461.88

labour component/unit qty	1658.50
Add contractor's profit and overhead charges	13.615% 225.80
labour component/unit qty (including contractor's profit)	1884.30

ABSTRACT:

A. Cost of Materials				Rs:	32507.75
B. Hire charges of Machinery				Rs:	857.39
C. Cost of Labour				Rs:	41461.88
				Rs:	74827.02
D.Add for contractor's profit and overheads on (A+B+C)		13.615%		Rs:	10187.7
Lead Charges for 1 Km for FA	10.00	cum @	43.17 Rs./Cum		431.74
Lead Charges for 1 Km for Stones/Stone Chips	25.00	cum @	41.51 Rs./Cum		1037.87
Total cost for	25.00	cum		Rs:	86484.33
Rate per cum		(A+B+C+D)/25		Rs:	3459.37

IRR-DAW-3-3

Providing and **constructing coursed rubble face stone masonry** using approved rubble stones in **cement mortar 1 : 3** proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., **with initial lead upto 1 km and all lifts.**

(Thickness of the CR face assumed: 0.75 m,Cement content : 178 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.375 cum, CR stones 30 x 30 x 45 cm : 9.75 No, CR stones 30 x 30 x 60 cm : 3.25 No)

DATA:

RATE ANALYSISUNIT:
25.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mortar	kg	4450.00000	4.22	18779.00
2	Coursed rubble stone 30 x 30 x 45 cm	Nos	244.00000	31.00	7564.00
3	Coursed rubble stone 30 x 30 x 60 cm	Nos	82.00000	36.00	2952.00
4	Rubble stones	cum	8.75000	395.00	3456.25
5	Stone chips	cum	3.75000	466.00	1747.50
6	Sand (Screened)	cum	9.37500	728.00	6825.00
Total cost of Materials				Rs:	41323.75

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
Total hire charges of Machinery				Rs:	857.39

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	work inspector	Day	1.00000	775.00	775.00
4	Stone chiseller Cl -II	Day	7.00000	640.00	4480.00
5	Mason Class-I	Day	2.50000	710.00	1775.00
6	Mason Class-II	Day	4.00000	640.00	2560.00
7	Chavali	Day	16.00000	640.00	10240.00
8	mazdoor				
	for batching cement (cement handling)	Day	2.00000	595.00	1190.00
	for batching sand	Day	6.00000	595.00	3570.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying & packing mortar	Day	10.00000	595.00	5950.00
	for loading chips	Day	1.00000	595.00	595.00
	for washing rubble / finishing / curing	Day	4.00000	595.00	2380.00
	for conveying mortar / chips	Day	12.00000	595.00	7140.00
Total cost of Labour				Rs:	45941.88

labour component/unit qty	1837.70
Add contractor's profit and overhead charges	13.615% 250.20
labour component/unit qty (including contractor's profit)	2087.90

ABSTRACT:

A. Cost of Materials			Rs:	41323.75
B. Hire charges of Machinery			Rs:	857.39
C. Cost of Labour			Rs:	45941.88
	Total		Rs:	88123.02
D.Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	11997.95
Lead Charges for 1 Km for FA	9.38	cum @	43.17 Rs./Cum	404.75
Lead Charges for 1 Km for Stones/Stone Chips	26.81	cum @	41.51 Rs./Cum	1113.02
Total cost for	25.00	cum	Rs:	101638.74
Rate per cum	(A+B+C+D)/25		Rs:	4065.55

IRR-DAW-3-4

Providing and **constructing coursed rubble face stone masonry** using approved rubble stones in **cement mortar 1 : 4** proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., **with initial lead upto 1 km and all lifts.**

(Cement content : 134 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.375 cum, CR stones 30 x 30 x 45 cm : 9.75 No, CR stones 30 x 30 x 60 cm : 3.25 No)

DATA:

RATE ANALYSISUNIT:
25.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mortar	kg	3350.00000	4.22	14137.00
2	Coursed rubble stone 30 x 30 x 45 cm	Nos	244.00000	31.00	7564.00
3	Coursed rubble stone 30 x 30 x 60 cm	Nos	82.00000	36.00	2952.00
4	Rubble stones	cum	8.75000	395.00	3456.25
5	Stone chips	cum	3.75000	466.00	1747.50
6	Sand (Screened)	cum	9.37500	728.00	6825.00
Total cost of Materials				Rs:	36681.75

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
Total hire charges of Machinery				Rs:	857.39

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	work inspector	Day	1.00000	775.00	775.00
4	Stone chiseller CI -II	Day	7.00000	640.00	4480.00
5	Mason Class-I	Day	2.50000	710.00	1775.00
6	Mason Class-II	Day	4.00000	640.00	2560.00
7	Chavali	Day	16.00000	640.00	10240.00
8	mazdoor				
	for batching cement (cement handling)	Day	2.00000	595.00	1190.00
	for batching sand	Day	6.00000	595.00	3570.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying & packing mortar	Day	10.00000	595.00	5950.00
	for loading chips	Day	1.00000	595.00	595.00
	for washing rubble / finishing / curing	Day	4.00000	595.00	2380.00
	for conveying mortar / chips	Day	12.00000	595.00	7140.00
Total cost of Labour				Rs:	45941.88

labour component/unit qty 1837.70

Add contractor's profit and overhead charges 13.615% 250.20

labour component/unit qty (including contractor's profit) **2087.90****ABSTRACT:**

A. Cost of Materials			Rs:	36681.75
B. Hire charges of Machinery			Rs:	857.39
C. Cost of Labour			Rs:	45941.88
	Total		Rs:	83481.02
D. Add for contractor's profit and overheads on (A+B+C)	13.615%		Rs:	11365.94
Lead Charges for 1 Km for FA	9.375	cum @	43.17 Rs./Cum	404.75
Lead Charges for 1 Km for Stones/Stone Chips	26.810	cum @	41.51 Rs./Cum	1113.02
Total cost for	25.00	cum	Rs:	96364.73
Rate per cum	(A+B+C+D)/25		Rs:	3854.59

IRR-DAW-3-5

Providing and **constructing chisel drafted and hammer dressed face stone masonry** with approved stones in **cement mortar 1 : 3** proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., complete with **initial lead upto 1 km and all lifts.**
(Cement content : 167 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.35 cum,
Dressed stones 30 x 30 x 45 cm : 10 No, Dressed stones 30 x 30 x 60 cm : 3.40 No)

DATA:

RATE ANALYSISUNIT:
25.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mortar	kg	4175.00000	4.22	17618.50
2	Coursed rubble stone 30 x 30 x 45 cm	Nos	250.00000	31.00	7750.00
3	Coursed rubble stone 30 x 30 x 60 cm	Nos	85.00000	36.00	3060.00
4	Rubble stones	cum	8.75000	395.00	3456.25
5	Stone chips	cum	3.75000	466.00	1747.50
6	Sand (Screened)	cum	8.75000	728.00	6370.00
Total cost of Materials				Rs:	40002.25

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
Total hire charges of Machinery				Rs:	857.39

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	work inspector	Day	1.00000	775.00	775.00
4	Stone chiseller CI -I	Day	14.00000	700.00	9800.00
5	Stone chiseller CI -II	Day	7.00000	640.00	4480.00
6	Mason Class-I	Day	2.50000	710.00	1775.00
7	Mason Class-II	Day	4.00000	640.00	2560.00
8	Chavali	Day	16.00000	640.00	10240.00
9	mazdoor				
	for batching cement (cement handling)	Day	2.00000	595.00	1190.00
	for batching sand	Day	6.00000	595.00	3570.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying & packing mortar	Day	10.00000	595.00	5950.00
	for loading chips	Day	1.00000	595.00	595.00
	for washing rubble / finishing / curing	Day	4.00000	595.00	2380.00
	for conveying mortar / chips	Day	12.00000	595.00	7140.00
Total cost of Labour				Rs:	55741.88

labour component/unit qty 2229.70

Add contractor's profit and overhead charges 13.615% 303.60

labour component/unit qty (including contractor's profit) **2533.30****ABSTRACT:**

A. Cost of Materials			Rs:	40002.25
B. Hire charges of Machinery			Rs:	857.39
C. Cost of Labour			Rs:	55741.88
	Total		Rs:	96601.52
D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	13152.3
Lead Charges for 1 Km for FA	8.750	cum @	43.17 Rs./Cum	377.77
Lead Charges for 1 Km for Stones/Stone Chips	27.215	cum @	41.51 Rs./Cum	1129.83
Total cost for	25.00	cum	Rs:	111261.42
Rate per cum	(A+B+C+D)/25		Rs:	4450.50

IRR-DAW-3-6

Providing and **constructing chisel drafted and hammer dressed face stone masonry** with approved stones in **cement mortar 1 : 4** proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., complete with **initial lead upto 1 km and all lifts.**
(Cement content : 125 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.35 cum, Dressed stones 30 x 30 x 45 cm : 10 No, Dressed stones 30 x 30 x 60 cm : 3.40 No)

DATA:

RATE ANALYSISUNIT:
25.00 cum**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement for mortar	kg	3125.00000	4.22	13187.50
2	Coursed rubble stone 30 x 30 x 45 cm	Nos	250.00000	31.00	7750.00
3	Coursed rubble stone 30 x 30 x 60 cm	Nos	85.00000	36.00	3060.00
4	Rubble stones	cum	8.75000	395.00	3456.25
5	Stone chips	cum	3.75000	466.00	1747.50
6	Sand (Screened)	cum	8.75000	728.00	6370.00
Total cost of Materials				Rs:	35571.25

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 ltr (ele)	Hour	8.00000	53.42	427.36
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
Total hire charges of Machinery				Rs:	857.39

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	1.00000	130.08	130.08
3	work inspector	Day	1.00000	775.00	775.00
4	Stone chiseller CI -I	Day	14.00000	700.00	9800.00
5	Stone chiseller CI -II	Day	7.00000	640.00	4480.00
6	Mason Class-I	Day	2.50000	710.00	1775.00
7	Mason Class-II	Day	4.00000	640.00	2560.00
8	Chavali	Day	16.00000	640.00	10240.00
9	mazdoor				
	for batching cement (cement handling	Day	2.00000	595.00	1190.00
	for batching sand	Day	6.00000	595.00	3570.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying & packing mortar	Day	10.00000	595.00	5950.00
	for loading chips	Day	1.00000	595.00	595.00
	for washing rubble / finishing / curing	Day	4.00000	595.00	2380.00
	for conveying mortar / chips	Day	12.00000	595.00	7140.00
	Total cost of Labour			Rs:	55741.88

labour component/unit qty 2229.70

Add contractor's profit and overhead charges 13.615% 303.60

labour component/unit qty (including contractor's profit) **2533.30****ABSTRACT:**

A. Cost of Materials				Rs:	35571.25
B. Hire charges of Machinery				Rs:	857.39
C. Cost of Labour				Rs:	55741.88
	Total			Rs:	92170.52
D.Add for contractor's profit and overheads on (A+B+C)	13.615%			Rs:	12549.02
Lead Charges for 1 Km for FA	8.750	cum @	43.17 Rs./Cum		377.77
Lead Charges for 1 Km for Stones/Stone Chips	27.215	cum @	41.51 Rs./Cum		1129.83
Total cost for	25.00	cum		Rs:	106227.14
Rate per	cum	(A+B+C+D)/25		Rs:	4249.09

IRR-DAW-3-7

Providing **cement mortar pointing to coursed rubble face stone masonry**
 50 mm deep in **CM 1 : 2** proportion by volume including raking and cleaning joints, pressing mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT:

100.00 sqm**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement	kg	455.44600	4.22	1921.98
2	Sand (Screened)	cum	0.73500	728.00	535.08
	Total cost of Materials			Rs:	2457.06

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
	Total hire charges of Machinery			Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Mason Class-I	Day	10.00000	710.00	7100.00
2	mazdoor	Day	10.00000	595.00	5950.00
	Total cost of Labour			Rs:	13050.00

labour component/unit qty 130.50

Add contractor's profit and overhead charges 13.615% 17.80

labour component/unit qty (including contractor's profit) **148.30****ABSTRACT:**

A. Cost of Materials				Rs:	2457.06
B. Hire charges of Machinery				Rs:	0.00
C. Cost of Labour				Rs:	13050.00
	Total			Rs:	15507.06
D.Add for contractor's profit and overheads on (A+B+C)	13.615%			Rs:	2111.29
Lead Charges for 1 Km for FA	0.735	cum @	43.17 Rs./Cum		31.73
Total cost for	100.00	sqm		Rs:	17650.08
Rate per	sqm	(A+B+C+D)/100		Rs:	176.50

IRR-DAW-3-8

Providing **cement mortar pointing to coursed rubble face stone masonry**
 50 mm deep in **CM 1 : 3** proportion by volume including raking and cleaning joints, pressing mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT:

100.00 sqm**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement	kg	321.80000	4.22	1358.00
2	Sand (Screened)	cum	0.73500	728.00	535.08
Total cost of Materials				Rs:	1893.08

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
	Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Mason Class-I	Day	10.00000	710.00	7100.00
2	mazdoor	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs:	13050.00

labour component/unit qty

130.50

Add contractor's profit and overhead charges

13.615%

17.80

labour component/unit qty (including contractor's profit)

148.30**ABSTRACT:**

A. Cost of Materials

Rs: 1893.08

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 13050.00

Total

Rs: 14943.08

D.Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs. 2034.5

Lead Charges for 1 Km for FA

0.74

cum @

43.17 Rs./Cum

Total cost for

100.00

sqm

Rs: **17009.31****Rate per sqm**

(A+B+C+D)/100

Rs: **170.09**

IRR_DAW-4

CONTRACTION JOINT WORKS:

IRR-DAW-4-1

Providing **25 mm thick guniting to rock or masonry surface in cement mortar 1 : 3** proportion by weight including cost of all materials, machinery, labour, raking-out and cleaning joints, scaffolding wherever required and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

36.00 sqm**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement	kg	609.90000	4.22	2573.78
2	Sand (Screened)	cum	1.09000	728.00	793.52
3	Use rate of grout hose 25 m	Hour	8.00000	6.09	48.72
4	Use rate of water hose 25 m	Hour	8.00000	6.19	49.52
5	Use rate of guniting nozzle	Hour	8.00000	3.89	31.12
6	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	3578.66

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Guniting equipment	Hour	8.00000	123.76	990.08
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
2	Air compressor 8.5 cmm (ele)	Hour	8.00000	172.20	1377.60
	Fuel / Energy charges	Hour	8.00000	475.86	3806.88
3	Pump 10 hp (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
4	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	6348.19

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Guniting equipment	Hour	8.00000	347.10	2776.80
2	Crew for Air compressor	Hour	8.00000	260.33	2082.64
3	Crew for pump	Hour	1.00000	130.08	130.08
4	Mason Cl II	Day	1.00000	640.00	640.00
5	mazdoor				
	for cement handling	Day	2.00000	595.00	1190.00
	for sand	Day	2.00000	595.00	1190.00
	mazdoor for other works	Day	2.00000	595.00	1190.00
	Total cost of Labour			Rs:	9199.52

labour component/unit qty 255.50

Add contractor's profit and overhead charges 13.615% 34.80

labour component/unit qty (including contractor's profit) **290.30****ABSTRACT:**

A. Cost of Materials			Rs:	3578.66
B. Hire charges of Machinery			Rs:	6348.19
C. Cost of Labour			Rs:	9199.52
		Total	Rs:	19126.37
Add for scaffolding	3%			478.16
		Total	Rs:	19604.53
D. Add for contractor's profit and overheads on (A+B+C+other		13.615%	Rs:	2669.16
Lead Charges for 1 Km for FA	1.09	cum @	43.17 Rs./Cum	47.06
Total cost for	36.00	sqm	Rs:	22320.75
Rate per	sqm	(A+B+C+D)/36	Rs:	620.02

IRR-DAW-4-2

Providing and **constructing contraction joints by fixing 16 SWG 60 cm wide annealed copper sheets** in two lines with 8 mm dia steel dowel rods on either side at one metre interval, forming 125 x 125 mm size groove in between copper strips for filling asphalt including fixing 15 mm dia two legged G.I pipe with U - bend at bottom for circulation of steam at intervals and forming 150 mm dia formed drain behind water seals including cost of all materials, machinery, labour, filling asphalt, circulation of steam through pipes etc., complete with all leads and lifts. consider 12 m height of contraction joint for analysis.

DATA:

RATE ANALYSISUNIT:
12.00 Rm**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Copper sheet 16 SWG	kg	215.00000	772.00	165980.00
2	Reinforcement steel 8 mm dia	kg	30.00000	59.00	1770.00
3	GI pipe 15 mm dia	Rm	24.00000	94.00	2256.00
4	Asphalt	kg	192.00000	49.00	9408.00
5	Elbows / Nipple / Plugs etc.,	LS	5.00000	20.00	100.00
6	Soldering materials	LS	40.00000	20.00	800.00
	Total cost of Materials			Rs:	180314.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Steam circulation arrangement	LS	8.00000	20.00	160.00
	Fuel charges (gas for heating)	LS	10.00000	26.00	260.00
	Total hire charges of Machinery			Rs:	420.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Welder	Day	1.00000	695.00	695.00
2	Tinsmith	Day	1.00000	670.00	670.00
3	Bar bender	Day	0.50000	850.00	425.00
4	Pipe fitter	Day	0.50000	795.00	397.50
5	Mason Class-I	Day	0.50000	710.00	355.00
6	mazdoor	Day	1.00000	595.00	595.00
	Total cost of Labour			Rs:	3137.50

labour component/unit qty 261.50

Add contractor's profit and overhead charges 13.615% 35.60

labour component/unit qty (including contractor's profit) **297.10**

ABSTRACT:

A. Cost of Materials
 B. Hire charges of Machinery
 C. Cost of Labour

Rs: 180314.00
 Rs: 420.00
 Rs: 3137.50
 Rs: 183871.50
 Rs: 25034.1
 Rs: **208905.60**
 Rs: **17408.80**

D.Add for contractor's profit and overheads on (A+B+C) Total
 Total cost for 12.00 Rm
 Rate per Rm (A+B+C+D)/12 13.615%

IRR-DAW-4-3

Providing and **constructing contraction joints by fixing 310 mm wide central bulb type approved quality PVC water stop** in two lines with 8 mm diameter steel dowel rods on either side at 1m interval, forming 125 x 125 mm size groove in between two water stops, providing & fixing 15 mm dia two legged G.I pipe with U-bend at bottom for circulation steam at interval, forming 150 mm diameter formed drain behind water seals including filling groove with asphalt, circulation of steam at intervals, cost of all materials, machinery, labour etc., **complete with all leads and lifts.**

DATA:

RATE ANALYSIS

UNIT:
12.00 Rm.

A. MATERIALS:

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	PVC water stops 310 mm wide	Rm	24.50000	457.00	11196.50
2	Reinforcement steel 8 mm dia	kg	30.00000	59.00	1770.00
3	GI pipe 15 mm dia	Rm	24.00000	94.00	2256.00
4	Asphalt	kg	192.00000	49.00	9408.00
5	Elbows / Nipple / Plugs etc.,	LS	5.00000	20.00	100.00
6	Vulcanizing materials	LS	25.00000	26.00	650.00
Total cost of Materials				Rs:	25380.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Steam circulation arrangement	LS	8.00000	20.00	160.00
	Fuel charges (gas for heating)	LS	10.00000	26.00	260.00
Total hire charges of Machinery				Rs:	420.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Welder	Day	0.50000	695.00	347.50
2	Bar bender	Day	0.50000	850.00	425.00
3	Pipe fitter	Day	0.50000	795.00	397.50
4	Mason Class-I	Day	0.50000	710.00	355.00
5	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	2120.00

labour component/unit qty 176.70
 Add contractor's profit and overhead charges 13.615% 24.10
 labour component/unit qty (including contractor's profit) **200.80**

ABSTRACT:

A. Cost of Materials
 B. Hire charges of Machinery
 C. Cost of Labour

Rs: 25380.50
 Rs: 420.00
 Rs: 2120.00
 Rs: 27920.50
 Rs: 3801.38
 Rs: **31721.88**
 Rs: **2643.49**

D.Add for contractor's profit and overheads on (A+B+C) Total
 Total cost for 12.00 Rm.
 Rate per Rm. (A+B+C+D)/12 13.615%

IRR-DAW-4-4

Providing and **constructing contraction joints by fixing 16 SWG 60 cm wide annealed copper sheets** in single line with 8 mm dia steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour etc., **complete with all leads and lifts.**

DATA:

RATE ANALYSIS

UNIT:
8.7 Rm

A. MATERIALS:

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Copper sheet 16 SWG	kg	77.00000	772.00	59444.00
2	Reinforcement steel 8 mm dia	kg	15.00000	59.00	885.00
3	Soldering materials	LS	10.00000	20.00	200.00
Total cost of Materials				Rs:	60529.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sundries such as soldering gun etc.,	LS	3.00000	41.00	123.00
	Fuel charges (gas)	LS	5.00000	26.00	130.00
Total hire charges of Machinery				Rs:	253.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Welder	Day	0.50000	695.00	347.50
2	Tinsmith	Day	0.50000	670.00	335.00
3	Bar bender	Day	0.50000	850.00	425.00
4	Mason Class-I	Day	0.50000	710.00	355.00
5	mazdoor	Day	0.50000	595.00	297.50
Total cost of Labour				Rs:	1760.00

labour component/unit qty 202.30

Add contractor's profit and overhead charges 13.615% 27.50

labour component/unit qty (including contractor's profit) **229.80****ABSTRACT:**

A. Cost of Materials	Rs:	60529.00
B. Hire charges of Machinery	Rs:	253.00
C. Cost of Labour	Rs:	1760.00
	Total	Rs: 62542.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 8515.09
Total cost for	8.70 Rm	Rs: 71057.09
Rate per Rm	(A+B+C+D)/8.70	Rs: 8167.48

IRR-DAW-4-5

Providing and **constructing contraction joints by fixing 23 cm wide central bulb type PVC water stop in single line** supported by 10 mm dia steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour, vulcanising joints etc., complete **with all leads and lifts.**

DATA:

RATE ANALYSISUNIT:
8.70 Rm**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	PVC water seal 23 cm wide	Rm	9.00000	44.00	396.00
2	Reinforcement steel 10 mm dia	kg	10.00000	59.00	590.00
3	Vulcanising materials	LS	2.00000	26.00	52.00
Total cost of Materials				Rs:	1038.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sundries such as heater etc.,	LS	0.50000	41.00	20.50
2	Fuel charges for heating	LS	0.50000	26.00	13.00
Total hire charges of Machinery					33.50

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Welder	Day	0.50000	695.00	347.50
2	Bar bender	Day	0.50000	850.00	425.00
3	Mason Class-I	Day	0.50000	710.00	355.00
4	mazdoor	Day	0.50000	595.00	297.50
Total cost of Labour				Rs:	1425.00

labour component/unit qty 163.80

Add contractor's profit and overhead charges 13.615% 22.30

labour component/unit qty (including contractor's profit) **186.10****ABSTRACT:**

A. Cost of Materials	Rs:	1038.00
B. Hire charges of Machinery	Rs:	33.50
C. Cost of Labour	Rs:	1425.00
	Total	Rs: 2496.50
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 339.9
Total cost for	8.70 Rm	Rs: 2836.40
Rate per Rm	(A+B+C+D)/8.70	Rs: 326.02

IRR_DAW-5

EARTH / ROCKFILL EMBANKMENT WORKS :

IRR-DAW-5-1

Providing **hearting embankment** using selected **impervious soil** from **approved borrow areas** in **layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, **watering**, compacting to density control of **not less than 95 percent** or as stipulated using **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT
825.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Angle dozer 90 hp	Hour	5.50000	1651.08	9080.94
	Fuel / Energy charges	Hour	5.50000	1030.76	5669.18
2	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
3	Tipppers 5.00 cum capacity 5 Nos.	Hour	40.00000	483.37	19334.80
	Fuel / Energy charges	Hour	40.00000	506.34	20253.60
4	Pump 5 hp (ele)	Hour	4.00000	3.15	12.60
	Fuel / Energy charges	Hour	4.00000	42.30	169.20
5	Water tanker 8000 ltr	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
6	Vibratory Roller 8 tonne	Hour	6.50000	1330.63	8649.10
	Fuel / Energy charges	Hour	6.50000	1741.39	11319.04
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	108011.34

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Dozer	Hour	5.50000	369.20	2030.60
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	40.00000	276.90	11076.00
4	Crew for Pump	Hour	4.00000	130.08	520.32
5	Crew for Water tanker	Hour	8.00000	273.98	2191.84
6	Crew for Roller	Hour	6.50000	416.52	2707.38
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	25409.74

labour component/unit qty 30.80
 Add contractor's profit and overhead charges 13.615% 4.20
 labour component/unit qty (including contractor's profit) **35.00**

ABSTRACT:

A. Cost of Materials			Rs:	0.00
B. Hire charges of Machinery			Rs:	108011.34
C. Cost of Labour			Rs:	25409.74
		Total	Rs:	133421.08
D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	18165.28
Total cost for	825.00	cum	Rs:	151586.36
Rate per cum	(A+B+C+D)/825		Rs:	183.74

IRR-DAW-5-2

Providing **cut-off trench filling** using selected **impervious soil** from **approved borrow areas** in **layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil to specified thickness, breaking clods, sectioning, **watering**, compacting to density control of **not less than 95 percent** using **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** as stipulated etc., **complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT :
825.00 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Angle dozer 90 hp	Hour	5.50000	1651.08	9080.94
	Fuel / Energy charges	Hour	5.50000	1030.76	5669.18
2	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
3	Tipppers 5.00 cum capacity 6 Nos.	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Pump 5 hp (ele)	Hour	4.00000	3.15	12.60
	Fuel / Energy charges	Hour	4.00000	42.30	169.20
5	Water tanker 8000 ltr	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
6	Vibratory Roller 8 tonne	Hour	6.50000	1330.63	8649.10
	Fuel / Energy charges	Hour	6.50000	1741.39	11319.04
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	115929.02

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Dozer	Hour	5.50000	369.20	2030.60
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Pump	Hour	4.00000	130.08	520.32
5	Crew for Water tanker	Hour	8.00000	273.98	2191.84
6	Crew for Roller	Hour	6.50000	416.52	2707.38
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	27624.94

labour component/unit qty 33.50

Add contractor's profit and overhead charges 13.615% 4.60

labour component/unit qty (including contractor's profit) **38.10****ABSTRACT:**

ABSTRACT:			
A. Cost of Materials			Rs: 0.00
B. Hire charges of Machinery			Rs: 115929.02
C. Cost of Labour			Rs: 27624.94
		Total	Rs: 143553.96
D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs: 19544.87
Total cost for	825.00 cum		Rs: 163098.83
Rate per cum	(A+B+C+D)/825		Rs: 197.70

IRR-DAW-5-3

Providing casing embankment using semi-pervious soil from approved borrow areas in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all other operations such as excavation, sorting out, transportation, spreading soil in layers of specified thickness, breaking clods, sectioning, **watering**, compacting to density control of **not less than 95 percent** using **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** as stipulated etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

A. MATERIALS:**630 cum**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Angle dozer 90 hp	Hour	4.00000	1651.08	6604.32
	Fuel / Energy charges	Hour	4.00000	1030.76	4123.04
2	Shovel 0.85 cum	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
3	Tipper 5 cum	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Pump 5 hp (ele)	Hour	3.00000	3.15	9.45
	Fuel / Energy charges	Hour	3.00000	42.30	126.90
5	Water tanker 8000 ltr	Hour	5.00000	448.93	2244.65
	Fuel / Energy charges	Hour	5.00000	506.34	2531.70
6	Vibratory Roller 8 tonne	Hour	5.00000	1330.63	6653.15
	Fuel / Energy charges	Hour	5.00000	1741.39	8706.95
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	88674.60

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Dozer	Hour	4.00000	369.20	1476.80
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	32.00000	276.90	8860.80
4	Crew for Pump	Hour	3.00000	130.08	390.24
5	Crew for Water tanker	Hour	5.00000	273.98	1369.90
6	Crew for Roller	Hour	5.00000	416.52	2082.60
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	21063.94

labour component/unit qty	33.40
Add contractor's profit and overhead charges	13.615% 4.50
labour component/unit qty (including contractor's profit)	37.90

ABSTRACT:

A. Cost of Materials			Rs:	0.00
B. Hire charges of Machinery			Rs:	88674.60
C. Cost of Labour			Rs:	21063.94
			Rs:	109738.54
		Total	Rs:	14940.9
D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	
Total cost for		630.00 cum	Rs:	124679.44
Rate per	cum	(A+B+C+D)/630	Rs:	197.90

IRR-DAW-5-4

Providing **casing embankment** using **semi-pervious soil** available from excavation in **layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all other operations such as re-excavation, sorting out, transportation, spreading in layers of specified thickness, breaking clods, sectioning, **watering**, compacting to specified density control of **not less than 95 percent** using **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** as stipulated etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

A. MATERIALS:**970.00 cum**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Angle dozer 90 hp	Hour	4.60000	1651.08	7594.97
	Fuel / Energy charges	Hour	4.60000	1030.76	4741.50
2	Shovel 0.85 cum	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
3	Tipper 5 cum	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Pump 5 hp (ele)	Hour	4.00000	3.15	12.60
	Fuel / Energy charges	Hour	4.00000	42.30	169.20
5	Water tanker 8000 ltr	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
6	Vibratory Roller 8 tonne	Hour	7.00000	1330.63	9314.41
	Fuel / Energy charges	Hour	7.00000	1741.39	12189.73
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	115174.37

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Dozer	Hour	4.60000	369.20	1698.32
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Pump	Hour	4.00000	130.08	520.32
5	Crew for Water tanker	Hour	8.00000	273.98	2191.84
6	Crew for Roller	Hour	7.00000	416.52	2915.64
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	27500.92

labour component/unit qty	28.40
Add contractor's profit and overhead charges	13.615% 3.90
labour component/unit qty (including contractor's profit)	32.30

ABSTRACT:

A. Cost of Materials
 B. Hire charges of Machinery
 C. Cost of Labour

Rs: 0.00
 Rs: 115174.37
 Rs: 27500.92
 Rs: 142675.29
 Rs: 19425.24
 Rs: **162100.53**
 Rs: **167.11**

D. Add for contractor's profit and overheads on (A+B+C)

Total
 13.615%

Total cost for 970.00 cum

Rate per cum (A+B+C+D)/970

IRR-DAW-5-4-A
 (New Item1 - 2011-12)

Providing casing embankment using semi-pervious soil available from excavation in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all other operations such as re-excavation, sorting out, transportation, spreading in layers of specified thickness, breaking clods, sectioning, **watering**, compacting to specified density control of **not less than 90 percent using 2 Tonne Roller as stipulated etc., complete with initial lead upto 1 km and all lifts.**

(For Maintenance Works)

DATA:

RATE ANALYSIS

UNIT :

970.00 cum

A. MATERIALS:

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Angle dozer 90 hp	Hour	4.60000	1651.08	7594.97
	Fuel / Energy charges	Hour	4.60000	1030.76	4741.50
2	Shovel 0.85 cum	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
3	Tipper 5 cum	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Pump 5 hp (ele)	Hour	4.00000	3.15	12.60
	Fuel / Energy charges	Hour	4.00000	42.30	169.20
5	Water tanker 8000 ltr	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
6	Vibratory Roller 8 tonne	Hour	7.00000	1330.63	9314.41
	Fuel / Energy charges	Hour	7.00000	1741.39	12189.73
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	115174.37

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Dozer	Hour	4.60000	369.20	1698.32
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Pump	Hour	4.00000	130.08	520.32
5	Crew for Water tanker	Hour	8.00000	273.98	2191.84
6	Crew for Roller	Hour	7.00000	416.52	2915.64
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	27500.92

labour component/unit qty

28.40

Add contractor's profit and overhead charges

13.615% 3.90

labour component/unit qty (including contractor's profit)

32.30

ABSTRACT:

A. Cost of Materials
 B. Hire charges of Machinery
 C. Cost of Labour

Rs: 0.00
 Rs: 115174.37
 Rs: 27500.92
 Rs: 142675.29
 Rs: 19425.24
 Rs: **162100.53**
 Rs: 167.11

D. Add for contractor's profit and overheads on (A+B+C)

Total
 13.615%

Total cost for 970.00 cum

Rate per cum (A+B+C+D)/970

Deduct Rate for Proctor's density Control of 95% using 8T roller as per IRR-PMW-3-23

60.75

Add Rate for Proctor's Density control of 90% using 2T Roller as per IRR-PMW-3-24

9.38

Rate per cum

Rs.

115.74

IRR-DAW-5-5

Providing **homogeneous embankment** using soil from **approved borrow area in layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, **watering**, compacting to density control of **not less than 95 percent** or as stipulated using **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSISUNIT :
807.00 cum**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Angle dozer 90 hp	Hour	5.40000	1651.08	8915.83
	Fuel / Energy charges	Hour	5.40000	1030.76	5566.10
2	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
3	Tipplers 5.00 cum capacity 5 Nos.	Hour	40.00000	483.37	19334.80
	Fuel / Energy charges	Hour	40.00000	506.34	20253.60
4	Pump 5 hp (ele)	Hour	4.00000	3.15	12.60
	Fuel / Energy charges	Hour	4.00000	42.30	169.20
5	Water tanker 8000 ltr	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
6	Vibratory Roller 8 tonne	Hour	6.40000	1330.63	8516.03
	Fuel / Energy charges	Hour	6.40000	1741.39	11144.90
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	107435.94

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Dozer	Hour	5.40000	369.20	1993.68
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	40.00000	276.90	11076.00
4	Crew for Pump	Hour	4.00000	130.08	520.32
5	Crew for Water tanker	Hour	8.00000	273.98	2191.84
6	Crew for Roller	Hour	6.40000	416.52	2665.73
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	25331.17

labour component/unit qty	31.40
Add contractor's profit and overhead charges	13.615% 4.30
labour component/unit qty (including contractor's profit)	35.70

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	107435.94
C. Cost of Labour	Rs:	25331.17
	Rs:	132767.11
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 18076.24
Total cost for	807.00 cum	Rs: 150843.35
Rate per cum	(A+B+C+D)/807	Rs: 186.92

IRR-DAW-5-6

Providing **embankment adjacent to masonry / concrete structures and filling trial pits** using **impervious soil** from **approved borrow areas in layers of 10 to 15 cm** and compacting each layer to density control of **not less than 95 percent using pneumatic tampers or by vibratory earth rammers** including cost of all materials, machinery, labour, picking previous layer, spreading soil in layer, breaking clods, **watering** etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSISUNIT :
80 cum**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of air hose	Hour	16.00000	12.19	195.04
			0.00000	0.00	0.00
Total cost of Materials				Rs:	195.04

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Angle dozer 90 hp	Hour	0.15000	1651.08	247.66
	Fuel / Energy charges	Hour	0.15000	1030.76	154.61
2	Shovel 0.85 cum	Hour	0.80000	1751.36	1401.09
	Fuel / Energy charges	Hour	0.80000	1473.48	1178.78
3	Tipper 5 cum	Hour	3.00000	483.37	1450.11
	Fuel / Energy charges	Hour	3.00000	506.34	1519.02
4	Air compressor 8.5 cmm (ele)	Hour	8.00000	172.20	1377.60
	Fuel / Energy charges	Hour	8.00000	475.86	3806.88
5	Pump 5 hp (ele)	Hour	0.40000	3.15	1.26
	Fuel / Energy charges	Hour	0.40000	42.30	16.92
6	Water tanker 8000 ltr	Hour	0.80000	448.93	359.14
	Fuel / Energy charges	Hour	0.80000	506.34	405.07
7	Pneumatic tampers 2 Nos.	Hour	16.00000	20.15	322.40
	Fuel / Energy charges	Hour	16.00000	0.00	0.00
8	Sundries	LS	1.00000	41.00	41.00
Total hire charges of Machinery				Rs:	12281.54

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Dozer	Hour	0.15000	369.20	55.38
2	Crew for Shovel	Hour	0.80000	369.20	295.36
3	Crew for Tipper	Hour	3.00000	276.90	830.70
4	Crew for Air compressor	Hour	8.00000	260.33	2082.64
5	Crew for Pump	Hour	0.40000	130.08	52.03
6	Crew for Water tanker	Hour	0.80000	273.98	219.18
7	Crew for Pneumatic tamper	Hour	16.00000	416.52	6664.32
8	work inspector	Day	1.00000	775.00	775.00
9	mazdoor	Day	5.00000	595.00	2975.00
Total cost of Labour				Rs:	13949.61

labour component/unit qty 174.40

Add contractor's profit and overhead charges 13.615% 23.70

labour component/unit qty (including contractor's profit) **198.10****ABSTRACT:**

A. Cost of Materials	Rs:	195.04
B. Hire charges of Machinery	Rs:	12281.54
C. Cost of Labour	Rs:	13949.61
	Rs:	26426.19
D. Add for contractor's profit and overheads on (A+B+C)	Rs:	3597.93
Total cost for	Rs:	30024.12
Rate per cum (A+B+C+D)/80	Rs:	375.30

IRR-DAW-5-7

Providing and **constructing rockfill embankment** with 300 mm down graded stones and quarry spalls from approved source including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing the surface to required slopes etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

400

cum

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of drill rod 2.5 m long	Rm	387.00000	46.64	18049.68
	Reconditioning charges @	10%			1804.97
2	Use rate of air hose 6 Nos.	Hour	60.00000	12.19	731.40
3	Explosive small dia	kg	118.00000	73.00	8614.00
4	Electric detonators	Nos	159.00000	12.00	1908.00
5	Detonator ordinary	Nos	8.00000	9.00	72.00
6	Fuse coil	Rm	200.00000	11.00	2200.00
7	Sundries (waste tyres etc)	LS	10.00000	41.00	410.00
Total cost of Materials				Rs:	33790.05

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Air compressor 8.5cmm(diesel)3 Nos	Hour	30.00000	280.01	8400.30
	Fuel / Energy charges	Hour	30.00000	1506.96	45208.80
2	Jack hammer 6 Nos	Hour	60.00000	19.11	1146.60
	Fuel / Energy charges	Hour	60.00000	0.00	0.00
3	Angle dozer 90 hp	Hour	4.00000	1651.08	6604.32
	Fuel / Energy charges	Hour	4.00000	1030.76	4123.04
4	Shovel 0.85 cum	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
5	Tipper 5 cum	Hour	24.00000	483.37	11600.88
	Fuel / Energy charges	Hour	24.00000	506.34	12152.16
Total hire charges of Machinery				Rs:	115034.82

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Air compressor	Hour	30.00000	333.22	9996.60
2	Crew for Jack hammer	Hour	60.00000	520.65	31239.00
3	Crew for Shovel	Hour	8.00000	369.20	2953.60
4	Crew for Tipper	Hour	24.00000	276.90	6645.60
5	Crew for Dozer	Hour	4.00000	369.20	1476.80
6	Blaster	Day	1.00000	780.00	780.00
7	Helper blaster	Day	1.00000	640.00	640.00
8	work inspector	Day	2.00000	775.00	1550.00
9	Mason Class-II	Day	2.00000	640.00	1280.00
10	mazdoor	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs:	62511.60

labour component/unit qty	156.30
Add contractor's profit and overhead charges	13.615% 21.30
labour component/unit qty (including contractor's profit)	177.60

ABSTRACT:

A. Cost of Materials	Rs:	33790.05
B. Hire charges of Machinery	Rs:	115034.82
C. Cost of Labour	Rs:	62511.60
	Rs:	211336.47
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 28773.46
Total cost for	400.00 cum	Rs: 240109.93
Rate per cum	(A+B+C+D)/400	Rs: 600.27

IRR-DAW-5-8

Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**UNIT : **100 cum**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Use rate of drill rod 1.5 m long	Rm	97.00000	46.64	4524.08
	Reconditionong charges @	10%			452.41
2	Use rate of air hose	Hour	15.00000	12.19	182.85
3	Explosive small dia	kg	30.00000	73.00	2190.00
4	Electric detonator	Nos	40.00000	12.00	480.00
5	Detonator ordinary	Nos	2.00000	9.00	18.00
6	Fuse coil	Rm	50.00000	11.00	550.00
7	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	8479.34

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Air compressor 8.5 cmm (diesel)	Hour	7.50000	280.01	2100.08
	Fuel / Energy charges	Hour	7.50000	1506.96	11302.20
2	Jack hammer	Hour	15.00000	19.11	286.65
	Fuel / Energy charges	Hour	15.00000	0.00	0.00
3	Shovel 0.85 cum	Hour	2.00000	1751.36	3502.72
	Fuel / Energy charges	Hour	2.00000	1473.48	2946.96
4	Tipper 5 cum	Hour	6.00000	483.37	2900.22
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
Total hire charges of Machinery				Rs:	26076.87

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Air compressor	Hour	7.50000	333.22	2499.15
2	Crew for Jack hammer	Hour	15.00000	520.65	7809.75
3	Crew for Shovel	Hour	2.00000	369.20	738.40
4	Crew for Tipper	Hour	6.00000	276.90	1661.40
5	Blaster	Day	0.50000	780.00	390.00
6	Helper blaster	Day	1.00000	640.00	640.00
7	work inspector	Day	1.00000	775.00	775.00
8	Mason Class-II	Day	7.00000	640.00	4480.00
9	mazdoor	Day	19.00000	595.00	11305.00
Total cost of Labour				Rs:	30298.70

labour component/unit qty	303.00
Add contractor's profit and overhead charges	13.615% 41.30
labour component/unit qty (including contractor's profit)	344.30

ABSTRACT:

A. Cost of Materials			Rs:	8479.34
B. Hire charges of Machinery			Rs:	26076.87
C. Cost of Labour			Rs:	30298.70
		Total	Rs:	64854.91
D.Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	8830
Total cost for	100.00 cum		Rs:	73684.91
Rate per cum	(A+B+C+D)/100		Rs:	736.85

IRR-DAW-5-9

Providing and **constructing dry rubble rock-toe** with rubble and stone chips from **dump yard (Spoil Bank)** including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete **with initial lead upto 1 km and all lifts.**

Note: Useful rubble and stone chips will be issued at dump yard at the issue rate for usefull rubble / stone chips. Sorting out and breaking charges included in rate analysis.

DATA:

RATE ANALYSIS

UNIT :

100 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Useful rubble (at dump yard)	cum	100.00000	204.00	20400.00
2	Useful stone chips (at dump yard)	cum	15.00000	236.00	3540.00
Total cost of Materials				Rs:	23940.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Shovel 0.85 cum	Hour	2.00000	1751.36	3502.72
	Fuel / Energy charges	Hour	2.00000	1473.48	2946.96
2	Tipper 5 cum	Hour	6.00000	483.37	2900.22
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
Total hire charges of Machinery				Rs:	12387.94

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Shovel	Hour	2.00000	369.20	738.40
2	Crew for Tipper	Hour	6.00000	276.90	1661.40
3	Mason Class-II	Day	7.00000	640.00	4480.00
4	work inspector	Day	1.00000	775.00	775.00
6	Stone breaker	Day	2.00000	640.00	1280.00
7	mazdoor	Day	21.00000	595.00	12495.00
Total cost of Labour				Rs:	21429.80

labour component/unit qty	214.30
Add contractor's profit and overhead charges	13.615% 29.20
labour component/unit qty (including contractor's profit)	243.50

ABSTRACT:

A. Cost of Materials			Rs:	23940.00
B. Hire charges of Machinery			Rs:	12387.94
C. Cost of Labour			Rs:	21429.80
		Total	Rs:	57757.74
D.Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	7863.72
Total cost for	100.00 cum		Rs:	65621.46
Rate per cum	(A+B+C+D)/100		Rs:	656.21

IRR-DAW-5-9-A
(New Item 1 -2020-21)

Providing and constructing dry rock pitching for groynes/platform using un-coursed rubble stone of size 300 mm thick from quarry to site of work including cost of all materials, machinery, labour charge hand picking un-coursed rubble stone to the designed profile with all leads and all lifts etc for **Above Water level**

DATA:

RATE ANALYSIS

UNIT :

100 cum**A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Un Coursed Rubble Stones at quarry	cum	100.00000	395.00	39500.00
2	Stone Chips at Quarry	cum	0.00000	466.00	0.00
Total cost of Materials				Rs:	39500.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
	Shovel 0.85 cum for loading tipper at the worksite	Hour	2.00000	1751.36	3502.72
1	Fuel / Energy charges	Hour	2.00000	1473.48	2946.96
2	Tipper 5 cum	Hour	6.00000	483.37	2900.22
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
Total hire charges of Machinery				Rs:	12387.94

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Shovel	Hour	2.00000	369.20	738.40
2	Crew for Tipper	Hour	6.00000	276.90	1661.40
3	Mason Class-II	Day	7.00000	640.00	4480.00
4	work inspector	Day	1.00000	775.00	775.00
5	Stone breaker	Day	2.00000	640.00	1280.00
6	mazdoor	Day	21.00000	595.00	12495.00
Total cost of Labour				Rs:	21429.80

labour component/unit qty	214.30
Add contractor's profit and overhead charges	13.615% 29.20
labour component/unit qty (including contractor's profit)	243.50

ABSTRACT:

A. Cost of Materials	Rs:	39500.00
B. Hire charges of Machinery	Rs:	12387.94
C. Cost of Labour	Rs:	21429.80
	Total	Rs: 73317.74
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 9982.21
Total cost for	100.00 cum	Rs: 83299.95
Rate per cum	(A+B+C+D)/100	Rs: 833.00

IRR-DAW-5-9-B
(New Item 2 -2020-21)

Providing and constructing dry rock pitching for groynes using un-coursed rubble stone of size 300 mm thick and un-coursed rubble stone chips from quarry to site of work including cost of all materials,machinery, labour charge hand picking un-coursed rubble stone and chips to the designed profile with all leads and all lifts etc for **Below Water level.**

DATA:

RATE ANALYSIS

UNIT : **100 cum**

A. MATERIALS:

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Un Coursed Rubble Stones at quarry	cum	100.00000	395.00	39500.00
2	Stone Chips at Quarry	cum	0.00000	466.00	0.00
Total cost of Materials				Rs:	39500.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Shovel 0.85 cum for loading tipper at the worksite	Hour	2.00000	1751.36	3502.72
	Fuel / Energy charges	Hour	2.00000	1473.48	2946.96
2	Tipper 5 cum	Hour	6.00000	483.37	2900.22
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
Total hire charges of Machinery				Rs:	12387.94

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Shovel	Hour	2.00000	369.20	738.40
2	Crew for Tipper	Hour	6.00000	276.90	1661.40
Total cost of Labour				Rs:	2399.80

labour component/unit qty	24.00
Add contractor's profit and overhead charges	13.615% 3.30
labour component/unit qty (including contractor's profit)	27.30

ABSTRACT:

A. Cost of Materials	Rs:	39500.00
B. Hire charges of Machinery	Rs:	12387.94
C. Cost of Labour	Rs:	2399.80
	Total	Rs: 54287.74
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 7391.28
Total cost for	100.00 cum	Rs: 61679.02
Rate per cum	(A+B+C+D)/100	Rs: 616.79

IRR-DAW-5-10

Providing and **laying 30 cm diameter open jointed hume pipes with collars in rock-toe** for drainage including cost of all materials, machinery, labour etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT : **100 Rm**

A. MATERIALS:

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Hume pipe 300 mm dia.with collar	Rm	100.00000	652.00	65200.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	65200.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

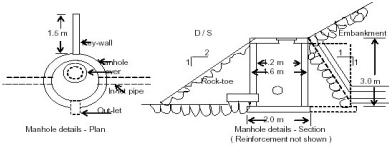
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Mason Cl- II	Day	2.00000	640.00	1280.00
2	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	4850.00

labour component/unit qty	48.50
Add contractor's profit and overhead charges	13.615% 6.60
labour component/unit qty (including contractor's profit)	55.10

ABSTRACT:

A. Cost of Materials	Rs:	65200.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	4850.00
	Rs:	70050.00
D.Ad	Rs:	9537.31
Total	Rs:	79587.31
Rate	Rs:	795.87

FILT



Provi
Excavation for foundation : (0.7867 x 2 x 2 x 2) + (1.5 x 0.4 x 2) : 7.50 cum
60 cm dia. top cover in M-15 grade cement concrete using 20 mm down graded, clean, hard coarse aggregate, 20 cm thick for bed / sides / top slab / 1.5 m long cut-off wall and 7.5 cm thick for cover including providing 12 mm dia reinforcement bars at 30 cm c / c bothways for bed / sides / cut-off wall / top slab / rungs and 8 mm dia bars at 15 cm c / c bothways for cover, excavation for foundation, providing 30 cm dia hume pipe outlet, cost of all materials, machinery, labour, formwork, scaffolding, batching, mixing, laying, vibrating, finishing, curing etc., complete with lead upto 1 km and all lifts.
(Cement content : 300 kg/cum , CA : 0.80 cum, Blending Ratio of CA -- 65:35, FA : 0.44 cum, superplasticizer (0.4% by wt. of cement)

IRR_DAW-6

IRR-DAW-6-1

DATA:

RATE ANALYSIS

A. MATERIALS:

UNIT 1 Each

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cement	kg	1331.70000	4.22	5619.77
	Cement for incidentals @ 3 kg / cum	kg	13.31700	4.22	56.20
2	Coarse aggregate 20 to 10 mm	cum	2.30828	1508.00	3480.89
	Coarse aggregate 10 to 4.75 mm	cum	1.24292	1098.00	1364.73
3	Fine aggregate (Un-Screened)	cum	1.95316	605.00	1181.66
4	Super plasticiser	kg	23.64567	63.00	1489.68
5	Reinforcement steel with 5 % wastage	kg	163.69500	59.00	9658.01
6	Binding wire	kg	4.00000	64.00	256.00
7	Hume pipe 300 mm dia	Rm	1.00000	652.00	652.00
8	Use rate of shuttering	sqm	36.00000	315.23	11348.28
9	Scaffolding of shuttering @	5%			567.41
10	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	35756.63

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Concrete mixer 300 / 200 (ele)	Hour	4.00000	53.42	213.68
	Fuel / Energy charges	Hour	4.00000	42.30	169.20
2	Needle vibrator 40 mm dia (ele)	Hour	4.00000	8.01	32.04
	Fuel / Energy charges	Hour	4.00000	8.46	33.84
3	Pump 5 hp (ele)	Hour	0.50000	3.15	1.58
	Fuel / Energy charges	Hour	0.50000	42.30	21.15
4	Sundries	LS	1.00000	41.00	41.00
Total hire charges of Machinery				Rs:	512.49

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Mason Cl- II	Day	1.00000	640.00	640.00
2	Bar bender	Day	1.00000	850.00	850.00
3	work inspector	Day	1.00000	775.00	775.00
4	mazdoor				
	for excavation for foundation	Day	2.00000	595.00	1190.00
	for bar bending	Day	1.00000	595.00	595.00
	for concreting	Day	5.00000	595.00	2975.00
	for excavation for foundation	Day	2.00000	595.00	1190.00
	for concreting	Day	4.00000	595.00	2380.00
	for curing	Day	1.00000	595.00	595.00
5	Labour for shuttering	sqm	36.00000	146.85	5286.60
Total cost of Labour				Rs:	16476.60

labour component/unit qty 16476.60

Add contractor's profit and overhead charges 13.615% 2243.30

labour component/unit qty (including contractor's profit) **18719.90****ABSTRACT:**

A. Cost of Materials	Rs:	35756.63
B. Hire charges of Machinery	Rs:	512.49
C. Cost of Labour	Rs:	16476.60
	Rs:	52745.72
D.Add for contractor's profit and overheads on (A+B+C)	Total 13.615%	Rs: 7181.33
Lead Charges for 1 Km for FA	1.95316 cum @ 43.17 Rs./Cum	84.33
Lead Charges for 1 Km for CA	3.55120 cum @ 41.51 Rs./Cum	147.43
Lead Charges for 1Km for Steel (including Loading and Unloading Charges)	0.163700 tonne @ 279.49 Rs./Tonne	45.75
Total cost for	1.00 Each	Rs: 60204.56
Rate per Each	(A+B+C+D)/1.0	Rs: 60204.56

IRR-DAW-6-2

Providing and **constructing longitudinal and cross graded filter drains** using sand and 80-20 mm and 20 mm down graded aggregates satisfying specified filter criteria in layers as per specifications including cost of all materials, machinery, labour, laying to required slopes, compaction etc. complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

100 cum

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Fine aggregate (Un-Screened)	cum	47.50000	605.00	28737.50
2	Coarse aggregate 80-40 mm	cum	17.86500	786.00	14041.89
3	Coarse aggregate 40-20 mm	cum	1.98500	1441.00	2860.39
4	Coarse aggregate 20-10 mm	cum	24.48750	1508.00	36927.15
5	Coarse aggregate 10 mm down	cum	8.16250	1098.00	8962.43
Total cost of Materials				Rs:	91529.36

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	38.00000	595.00	22610.00
Total cost of Labour				Rs:	23385.00

labour component/unit qty 233.90

Add contractor's profit and overhead charges 13.615% 31.80

labour component/unit qty (including contractor's profit) **265.70****ABSTRACT:**

A. Cost of Materials	Rs:	91529.36
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	23385.00
	Rs:	114914.36
D.Add for contractor's profit and overheads on (A+B+C)	Total 13.615%	Rs: 15645.59
Total cost for	100.00 cum	Rs: 130559.95
Rate per cum	(A+B+C+D)/100	Rs: 1305.60

IRR-DAW-6-3

Providing and **constructing 1.40 m thick vertical or inclined graded filter media** consisting of 20 cm thick sand layers, 25 cm thick 20 mm down coarse aggregate layers and 50 cm thick 80-20 mm coarse aggregate layer using approved materials satisfying specified filter criteria as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

A. MATERIALS:		UNIT :		100 cum	
SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Fine aggregate (Un-Screened)	cum	28.60000	605.00	17303.00
2	Coarse aggregate 80-40 mm	cum	32.13000	786.00	25254.18
3	Coarse aggregate 40-20 mm	cum	3.57000	1441.00	5144.37
4	Coarse aggregate 20-10 mm	cum	28.12500	1508.00	42412.50
5	Coarse aggregate 10 mm down	cum	8.92500	1098.00	9799.65
Total cost of Materials				Rs:	99913.70

B. MACHINERY:		UNIT :		100 cum	
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:		UNIT :		100 cum	
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	38.00000	595.00	22610.00
Total cost of Labour				Rs:	23385.00

labour component/unit qty 233.90
 Add contractor's profit and overhead charges 13.615% 31.80
 labour component/unit qty (including contractor's profit) **265.70**

ABSTRACT:

A. Cost of Materials	Rs:	99913.70
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	23385.00
Total	Rs:	123298.70
D.Add for contractor's profit and overheads on (A+B+C)	Rs:	16787.12
Total cost for 100.00 cum	Rs:	140085.82
Rate per cum (A+B+C+D)/100	Rs:	1400.86

IRR-DAW-6-4

Providing and constructing graded filter media below and behind rock-toe consisting of 20 cm thick sand, 25 cm thick 20 - 4.75 mm and 40 cm thick 80 - 20 mm size graded coarse aggregates satisfying filter criteria as per specifications including cost of all materials, labour, machinery, laying to required slope, compaction etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

A. MATERIALS:		UNIT :		100 cum	
SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Fine aggregate (Un-Screened)	cum	23.55000	605.00	14247.75
2	Coarse aggregate 80-40 mm	cum	42.39000	786.00	33318.54
3	Coarse aggregate 40-20 mm	cum	4.71000	1441.00	6787.11
4	Coarse aggregate 20-10 mm	cum	22.05000	1508.00	33251.40
5	Coarse aggregate 10 mm down	cum	7.35000	1098.00	8070.30
Total cost of Materials				Rs:	95675.10

B. MACHINERY:		UNIT :		100 cum	
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:		UNIT :		100 cum	
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	34.00000	595.00	20230.00
Total cost of Labour				Rs:	21005.00

labour component/unit qty 210.10
 Add contractor's profit and overhead charges 13.615% 28.60
 labour component/unit qty (including contractor's profit) **238.70**

ABSTRACT:

A. Cost of Materials
 B. Hire charges of Machinery
 C. Cost of Labour

Rs: 95675.10
 Rs: 0.00
 Rs: 21005.00
 Rs: 116680.10
 Rs: 15886
 Rs: **132566.10**
 Rs: **1325.66**

D. Add for contractor's profit and overheads on (A+B+C) 13.615%
 Total cost for 100.00 cum
Rate per cum (A+B+C+D)/100

IRR-DAW-6-4-A
 (New Item2- 2011-12)

Providing and **constructing graded filter media below and behind rock-toe** consisting of 30 cm thick 80 - 20 mm size graded coarse aggregates satisfying filter criteria as per specifications including cost of all materials, labour, machinery, laying to required slope, compaction etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

A. MATERIALS:		UNIT		100 cum	
Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Coarse aggregate 80-40 mm	cum	35.00000	786.00	27510.00
2	Coarse aggregate 40-20 mm	cum	55.00000	1441.00	79255.00
3	Coarse aggregate 20-10 mm	cum	5.00000	1508.00	7540.00
4	Coarse aggregate 10 mm down	cum	5.00000	1098.00	5490.00
Total cost of Materials				Rs:	119795.00

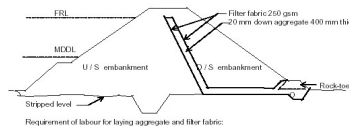
B. MACHINERY:		UNIT		100 cum	
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:		UNIT		100 cum	
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	12.00000	595.00	7140.00
Total cost of Labour				Rs:	7915.00

labour compi 9.20
 Add contract 0.80
 labour compi **0.00**

ABSTRACT:

A. Cost of M:
 B. Hire charg
 C. Cost of L:



Requirement of labour for laying aggregate and filter fabric:
 1 heavy mazdoor & 1 light mazdoor 6 cum / day.

D. Add for contractor's profit and overheads on (A+B+C) 13.615%
 Total cost for 100.00 cum
Rate per cum (A+B+C+D)/100

Rs: 119795.00
 Rs: 0.00
 Rs: 7915.00
 Rs: 127710.00
 Rs: 17387.72
 Rs: **145097.72**
 Rs: **1450.98**

IRR-DAW-6-5

Providing and **laying filter media consisting of 2 layers of 250 gsm poly-propylene** non-woven filter fabric and 400 mm thick 20 mm down graded coarse aggregate for vertical / inclined and horizontal filter blanket for embankment including cost of all materials, machinery, labour etc., complete **with lead upto 50 m for aggregate and all leads for fabric and all lifts.**

DATA:

RATE ANALYSIS

A. MATERIALS:

UNIT :

100 sqm

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	PP filter fabric 250 gsm	sqm	220.00000	135.00	29700.00
2	20 - 10 mm CA @ 75 %	cum	30.00000	1508.00	45240.00
	10 mm down CA @ 25 %	cum	10.00000	1098.00	10980.00
Total cost of Materials				Rs:	85920.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	14.00000	595.00	8330.00
Total cost of Labour				Rs:	9105.00

labour component/unit qty	91.10
Add contractor's profit and overhead charges	13.615% 12.40
labour component/unit qty (including contractor's profit)	103.50

ABSTRACT:

A. Cost of Materials	Rs:	85920.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	9105.00
	Total	Rs: 95025.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 12937.65
Total cost for		Rs: 107962.65
Rate per sqm	100.00 sqm (A+B+C+D)/100	Rs: 1079.63

IRR-DAW-6-6

Providing and **constructing 45 cm thick chimney filter** using clean approved sand satisfying filter criteria including cost of all materials, machinery, labour, compacting etc., complete with **initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

A. MATERIALS:

UNIT :

100 cum

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sand (Un-Screened)	cum	105.00000	605.00	63525.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	63525.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	30.00000	595.00	17850.00
Total cost of Labour				Rs:	18625.00

labour component/unit qty	186.30
Add contractor's profit and overhead charges	13.615% 25.40
labour component/unit qty (including contractor's profit)	211.70

ABSTRACT:

A. Cost of Materials	Rs:	63525.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	18625.00
	Total	Rs: 82150.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 11184.72
Total cost for		Rs: 93334.72
Rate per cum	100.00 cum (A+B+C+D)/100	Rs: 933.35

IRR-DAW-6-7

Providing and **constructing 90 cm thick transition cum filter media behind rockfill** using approved sand and 80-20 mm and 20 mm down graded aggregates satisfying the filter criteria in layers of 30 cm thickness each as per specifications including cost of all materials, machinery, labour, laying each layer to required slope, compaction etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSIS

A. MATERIALS:		UNIT :		100 cum.	
Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sand (Un-Screened)	cum	34.00000	605.00	20570.00
2	Coarse aggregate 80-40 mm	cum	30.60000	786.00	24051.60
3	Coarse aggregate 40-20 mm	cum	3.40000	1441.00	4899.40
4	Coarse aggregate 20-10 mm	cum	25.50000	1508.00	38454.00
5	Coarse aggregate 10 mm down	cum	8.50000	1098.00	9333.00
Total cost of Materials				Rs:	97308.00

B. MACHINERY:		UNIT :		100 cum.	
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:		UNIT :		100 cum.	
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	40.00000	595.00	23800.00
Total cost of Labour				Rs:	24575.00

labour component/unit qty	245.80
Add contractor's profit and overhead charges	13.615% 33.50
labour component/unit qty (including contractor's profit)	279.30

ABSTRACT:

A. Cost of Materials	Rs:	97308.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	24575.00
	Total	Rs: 121883.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 16594.37
Total cost for	100.00 cum.	Rs: 138477.37
Rate per cum.	(A+B+C+D)/100	Rs: 1384.77

IRR-DAW-6-8

Providing and **constructing 60 cm thick hand packed rough stone revetment** with 65 to 75 cm long through stones at 1.50 m c / c over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size approved graded aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with chips, finishing etc. complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

A. MATERIALS:		UNIT :		100 sqm	
Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sand (Un-Screened)	cum	15.30000	605.00	9256.50
2	Coarse aggregate 10 mm down	cum	15.30000	1098.00	16799.40
3	Coarse aggregate 40-20 mm	cum	15.30000	1441.00	22047.30
4	Stone chips	cum	9.00000	466.00	4194.00
5	Rough stones (rubble) 30 to 45 cm long	cum	57.60000	395.00	22752.00
6	Through stones 65 to 75 cm long	Nos	44.00000	72.00	3168.00
Total cost of Materials				Rs:	78217.20

B. MACHINERY:		UNIT :		100 sqm	
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class-II	Day	10.00000	640.00	6400.00
3	mazdoor	Day	33.00000	595.00	19635.00
Total cost of Labour				Rs:	26810.00

labour component/unit qty	268.10
Add contractor's profit and overhead charges	13.615% 36.50
labour component/unit qty (including contractor's profit)	304.60

ABSTRACT:

A. Cost of Materials	Rs:	78217.20
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	26810.00
	Total	Rs: 105027.20
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs. 14299.45
Total cost for	100.00 sqm	Rs: 119326.65
Rate per sqm	(A+B+C+D)/100	Rs: 1193.27

IRR-DAW-6-9

Providing and **constructing 60 cm thick hand packed rough stone revetment** with 65 to 75 cm long through stones at 1.50 m c / c over a backing of 60 cm thick graded filter media consisting of sand, 10 mm and 40 mm size approved graded aggregates laid in layers of 20 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with chips, finishing etc. complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

100 sqm

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sand (Un-Screened)	cum	20.40000	605.00	12342.00
2	Coarse aggregate 10 mm down	cum	20.40000	1098.00	22399.20
3	Coarse aggregate 40-20 mm	cum	20.40000	1441.00	29396.40
4	Stone chips	cum	9.00000	466.00	4194.00
5	Rough stones (rubble) 30 to 45 cm long	cum	57.60000	395.00	22752.00
6	Through stones 65 to 75 cm long	Nos	44.00000	72.00	3168.00
Total cost of Materials				Rs:	94251.60

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class-II	Day	10.00000	640.00	6400.00
3	mazdoor	Day	39.00000	595.00	23205.00
Total cost of Labour				Rs:	30380.00

labour component/unit qty	303.80
Add contractor's profit and overhead charges	13.615% 41.40
labour component/unit qty (including contractor's profit)	345.20

ABSTRACT:

A. Cost of Materials	Rs:	94251.60
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	30380.00
	Total	Rs: 124631.60
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs. 16968.59
Total cost for	100.00 sqm	Rs: 141600.19
Rate per sqm	(A+B+C+D)/100	Rs: 1416.00

IRR-DAW-6-10

Providing and **constructing 60 cm thick hand packed rough stone riprap over a backing of 45 cm thick graded filter media** consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

100 sqm.

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sand (Un-Screened)	cum	15.30000	605.00	9256.50
2	Coarse aggregate 10 mm down	cum	15.30000	1098.00	16799.40
3	Coarse aggregate 40-20 mm	cum	15.30000	1441.00	22047.30
4	Stone chips	cum	9.00000	466.00	4194.00
5	Rough stones (rubble)	cum	60.00000	395.00	23700.00
Total cost of Materials				Rs:	75997.20

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class-II	Day	5.00000	640.00	3200.00
3	mazdoor	Day	28.00000	595.00	16660.00
Total cost of Labour				Rs:	20635.00

labour component/unit qty 206.40
 Add contractor's profit and overhead charges 13.615% 28.10
 labour component/unit qty (including contractor's profit) **234.50**

ABSTRACT:

A. Cost of Materials	Rs:	75997.20
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	20635.00
	Rs:	96632.20
D.Add for contractor's profit and overheads on (A+B+C)	Rs:	13156.47
Total cost for	Rs:	109788.67
Rate per sqm. (A+B+C+D)/100	Rs:	1097.89

IRR-DAW-6-11

Providing and **constructing 75 cm thick hand packed rough stone riprap** over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips, etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

100 sqm

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sand (Un-Screened)	cum	15.30000	605.00	9256.50
2	Coarse aggregate 10 mm down	cum	15.30000	1098.00	16799.40
3	Coarse aggregate 40-20 mm	cum	15.30000	1441.00	22047.30
4	Stone chips	cum	11.00000	466.00	5126.00
5	Rough stones (rubble)	cum	75.00000	395.00	29625.00
Total cost of Materials				Rs:	82854.20

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class-II	Day	6.00000	640.00	3840.00
3	mazdoor	Day	30.00000	595.00	17850.00
Total cost of Labour				Rs:	22465.00

labour component/unit qty 224.70
 Add contractor's profit and overhead charges 13.615% 30.60
 labour component/unit qty (including contractor's profit) **255.30**

ABSTRACT:

A. Cost of Materials		Rs:	82854.20
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	22465.00
	Total	Rs:	105319.20
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	14339.21
Total cost for	100.00 sqm	Rs:	119658.41
Rate per sqm	(A+B+C+D)/100	Rs:	1196.58

IRR-DAW-6-12

Providing and constructing 90 cm thick hand packed rough stone riprap over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSIS

A. MATERIALS:		UNIT :		100 sqm	
Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sand (Un-Screened)	cum	15.30000	605.00	9256.50
2	Coarse aggregate 10 mm down	cum	15.30000	1098.00	16799.40
3	Coarse aggregate 40-20 mm	cum	15.30000	1441.00	22047.30
4	Stone chips	cum	13.50000	466.00	6291.00
5	Rough stones (rubble)	cum	90.00000	395.00	35550.00
Total cost of Materials				Rs:	89944.20

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class-II	Day	8.00000	640.00	5120.00
3	mazdoor	Day	34.00000	595.00	20230.00
Total cost of Labour				Rs:	26125.00

labour component/unit qty	261.30
Add contractor's profit and overhead charges	13.615% 35.60
labour component/unit qty (including contractor's profit)	296.90

ABSTRACT:

A. Cost of Materials		Rs:	89944.20
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	26125.00
	Total	Rs:	116069.20
D.Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	15802.82
Total cost for	100.00 sqm	Rs:	131872.02
Rate per sqm	(A+B+C+D)/100	Rs:	1318.72

IRR-DAW-6-13

Providing and laying Hariyala or other approved quality turfing sods for the slopes of earthen embankments over 20 mm thick sand backing including cost of all materials, machinery, labour including preparing surface, spreading sand, watering for 15 days etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

A. MATERIALS:		UNIT :		100 sqm.	
Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Sand for filling	cum	2.00000	460.00	920.00
2	Hariyala turfing sods	sqm	100.00000	26.00	2600.00
Total cost of Materials				Rs:	3520.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Cartman with double bullock cart	Day	2.00000	710.00	1420.00
2	mazdoor	Day	15.00000	595.00	8925.00
Total cost of Labour				Rs:	10345.00

labour component/unit qty	103.50
Add contractor's profit and overhead charges	13.615% 14.10
labour component/unit qty (including contractor's profit)	117.60

ABSTRACT:

A. Cost of Materials			Rs:	3520.00
B. Hire charges of Machinery			Rs:	0.00
C. Cost of Labour			Rs:	10345.00
		Total	Rs:	13865.00
D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	1887.72
Lead Charges for 1 Km for FA	2.00	cum @	43.17 Rs./Cum	86.35
Total cost for	100.00 sqm.		Rs:	15839.07
Rate per	sqm.	(A+B+C+D)/100	Rs:	158.39

Chapter - II

TUNNEL AND ALLIED WORKS - Standard Data

(WILL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)
FOR THE YEAR :2024-25

Index- code

TUNNEL AND ALLIED WORKS - DATA RATES

IRR-TAW

Directions to add Seigniorage Charges and Additional Lead Charges

Seigniorage Charges:

1. The unit rate for work item in the Standard Data is **exclusive of Seigniorage Charges** wherever applicable.
2. The appropriate Seigniorage Charges for relevant materials are to be added in the Part-B of the estimate

Additional Lead and Lift Charges:

1. Unless otherwise specified the basic rates are inclusive of all lifts.
2. For concrete, masonry and reinforcement items **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:
Additional lead charges for Steel, sand, coarse aggregate, stones and stone chips shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.
In case of Cement and Steel, Loading and unloading charges are already added in the work item while arriving the unit rate and hence should not be added again

Example:

Total lead for sand from approved sand quarry :	15 Km
Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) :	1 Km
Additional lead charges : Lead charges for 5 km	Rs. 115.13
Lead charges for next 10 km	Rs. 172.69
Total lead charges for 15 km /cum	Rs. 287.82
Less 1 km initial lead charges /cum	Rs. 43.17 (-)
Net additional lead charges / cum	Rs. 244.65

3. The Leads for Steel shall be from the nearest market place to the Project area

4. For earth/rockfill embankments **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:

Additional lead charges for Earth, Murrum etc., shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item. (same as above)

Example:

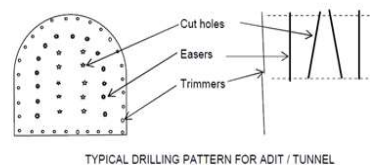
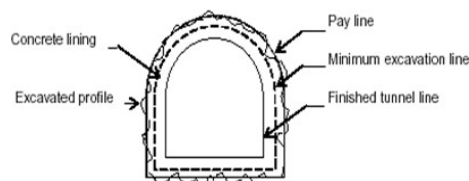
Total lead for earth from approved borrow area :	15 Km
Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) :	1 Km
Additional lead charges : Lead charges for 5 km	Rs. 115.13
Lead charges for next 10 km	Rs. 172.69
Total lead charges for 15 km /cum	Rs. 287.82
Less 1 km initial lead charges /cum	Rs. 43.17 (-)
Net additional lead charges / cum	Rs. 244.65

5. The initial lead up to 50 m as mentioned in some standard data items is meant for manual lead within the working area. For conveyance of materials, the lead required from quarry/Borrow area/ Dump Area to worksite shall be added to the data without deducting the 50 m initial lead charges

TAW -Work Items

IRR-TAW-1 EXCAVATION :

IRR-TAW-1-1 **Excavation for adit by tunnelling methods in all types of rock** including cost of all materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage, removing and hauling the excavated muck outside adit upto specified dump area and all other ancillary operations etc., complete **with initial lead upto 1km and all lifts.**



DATA:

RATE ANALYSISUNIT : **38.50 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Small dia explosive	kg	40.00000	73.00	2920.00
2	Delay detonators	Nos	54.00000	24.00	1296.00
3	Electric detonators	Nos	5.00000	12.00	60.00
4	Detonating fuse coil	Rm	50.00000	11.00	550.00
5	Use rate of drill rod 2.5 m long	Rm	119.00000	46.64	5550.16
	Reconditioning charges @	10%			555.02
6	Use rate of air hose	Hour	20.00000	6.09	121.88
7	Use rate of water hose	Hour	20.00000	6.19	123.75
8	Sundries(paint / template etc)	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	11258.81

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling jumbo	Hour	8.00000	389.85	3118.80
	Fuel / Energy charges	Hour	8.00000	72.34	578.72
2	Air compressor 15 cmm (ele)	Hour	5.00000	136.20	681.00
	Fuel / Energy charges	Hour	5.00000	1057.45	5287.25
3	Jack hammer (4 x 5 hrs)	Hour	20.00000	19.11	382.20
	Fuel / Energy charges	Hour	20.00000	0.00	0.00
4	Pusher leg	Hour	20.00000	14.83	296.60
	Fuel / Energy charges	Hour	20.00000	0.00	0.00
5	Convey mucker	Hour	6.50000	819.19	5324.74
	Fuel / Energy charges	Hour	6.50000	294.40	1913.60
6	Dumper (1 x 6.5 hrs)	Hour	6.50000	628.34	4084.21
	Fuel / Energy charges	Hour	6.50000	675.13	4388.35
7	Pump 10 hp (ele)	Hour	5.00000	7.03	35.15
	Fuel / Energy charges	Hour	5.00000	84.60	423.00
8	Ventilation fans 20 hp	Hour	1.00000	12.70	12.70
	Fuel / Energy charges	Hour	1.00000	169.19	169.19
9	Sundries(explosive van / magazine)	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	26777.51

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling jumbo	Hour	8.00000	277.68	2221.44
2	Crew for Air compressor	Hour	5.00000	277.68	1388.40
3	Crew for Jack hammer	Hour	20.00000	520.65	10413.00
4	Crew for Convey mucker	Hour	6.50000	277.68	1804.92
5	Crew for Dumper	Hour	6.50000	354.43	2303.80
6	Crew for Pump	Hour	5.00000	130.08	650.40
7	Crew for ventilation fans	Hour	1.00000	44.87	44.87
8	Surveyor	Day	0.50000	1100.00	550.00
9	Foreman	Day	1.00000	780.00	780.00
10	Fitter / Mechanic	Day	2.00000	720.00	1440.00
11	Blaster (Licensed)	Day	1.00000	780.00	780.00
12	Helper blasting	Day	2.00000	640.00	1280.00
13	Hammerman	Day	2.00000	640.00	1280.00
14	work inspector 1 in each shift	Day	3.00000	775.00	2325.00
15	Khalasi for mucking shift 4 Nos	Day	4.00000	695.00	2780.00
16	mazdoor				
	for mucking shift 4 Nos	Day	4.00000	595.00	2380.00
	for other 2 shifts 1 No each shift	Day	2.00000	595.00	1190.00
	for cleaning & miscellaneous	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	34801.83

labour component/unit qty 903.90
Add contractor's profit and overhead charges 13.615% 123.10
labour component/unit qty (including contractor's profit) **1027.00**

ABSTRACT:

A. Cost of Materials		Rs:	11258.81
B. Hire charges of Machinery		Rs:	26777.51
C. Cost of Labour		Rs:	34801.83
	Total	Rs:	72838.15
Add for Air and Water line @	1.00%	Rs:	728.38
Add for Ventilation @	4.50%	Rs:	3277.72
Add for Lighting @	1.60%	Rs:	1165.41
Add for Ele sub-station / Demand charges @	2.50%	Rs:	1820.95
	Total	Rs:	79830.61
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	10868.94
Total cost for	38.50 cum	Rs:	90699.55
Rate per cum	(A+B+C+D)/38.50	Rs:	2355.83

IRR-TAW-1-2 **Excavation for vertical / inclined shaft in all types of soft / hard rock** including cost of all materials, machinery, labour, shoring, strutting, scaling excavated surface, ventilation, lighting, drainage, removing and hauling excavated muck outside shaft upto specified dump area and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**

DATA

RATE ANALYSISUNIT : **30.00 cum****A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Small dia explosive	kg	32.00000	73.00	2336.00
2	Electric detonator	Nos	65.00000	12.00	780.00
3	Detonating fuse coil	Rm	50.00000	11.00	550.00
4	Use rate of drill rod 1.6 m long	Rm	95.00000	31.16	2960.20
5	Reconditioning charges @	10%			296.02
6	Use rate of air hose	Hour	18.00000	24.38	438.84
7	Use rate of water hose	Hour	16.00000	24.75	396.00
8	Use rate of rail track	Shift	3.00000	156.96	470.88
9	Use rate of mucking bucket	Hour	24.00000	11.38	273.12
10	Sundries(paint / template etc)	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	8583.06

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Air compressor 15 cmm (ele)	Hour	4.50000	136.20	612.90
	Fuel / Energy charges	Hour	4.50000	1057.45	4758.53
2	Jack hammer (4 x 4 hrs)	Hour	16.00000	19.11	305.76
	Fuel / Energy charges	Hour	16.00000	0.00	0.00
3	Pump 10 hp (ele)	Hour	4.00000	7.03	28.12
	Fuel / Energy charges	Hour	4.00000	84.60	338.40
4	Pump 20 hp electric	Hour	2.00000	13.18	26.36
	Fuel / Energy charges	Hour	2.00000	169.19	338.38
5	Winch 35 hp electric	Hour	28.00000	139.99	3919.72
	Fuel / Energy charges	Hour	28.00000	207.26	5803.28
6	Tipping tub 1.5 cum	Hour	24.00000	72.79	1746.96
	Fuel / Energy charges	Hour	24.00000	0.00	0.00
7	Sundries(explosive van / magazine)	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	17960.41

C. LABOUR:

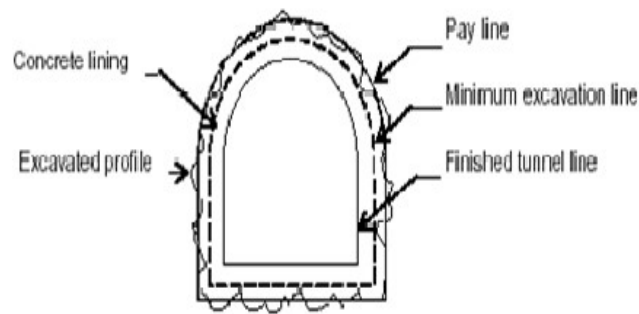
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Air compressor	Hour	4.50000	277.68	1249.56
2	Crew for Jack hammer	Hour	16.00000	520.65	8330.40
3	Crew for Pump 10 hp	Hour	4.00000	130.08	520.32
4	Crew for Pump 20 hp	Hour	2.00000	130.08	260.16
5	Crew for Winch	Hour	28.00000	416.52	11662.56
6	Surveyor	Day	0.50000	1100.00	550.00
7	Foreman	Day	4.00000	780.00	3120.00
8	Fitter / Mechanic	Day	2.00000	720.00	1440.00
9	Blaster (Licensed)	Day	1.00000	780.00	780.00
10	Helper blasting	Day	2.00000	640.00	1280.00
11	Hammerman 1 No. in each shift	Day	3.00000	640.00	1920.00
12	work inspector 1 in each shift	Day	4.00000	775.00	3100.00
13	Khalasi for mucking 2 Nos in each shift	Day	6.00000	695.00	4170.00
14	mazdoor				
	for mucking 8 Nos in each shift	Day	24.00000	595.00	14280.00
	for other 2 shifts 1 No / shift	Day	2.00000	595.00	1190.00
	for cleaning & miscellaneous	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	55043.00

labour component/unit qty	1834.80
Add contractor's profit and overhead charges	13.615% 249.80
labour component/unit qty (including contractor's profit)	2084.60

ABSTRACT:

A. Cost of Materials		Rs:	8583.06
B. Hire charges of Machinery		Rs:	17960.41
C. Cost of Labour		Rs:	55043.00
	Total	Rs:	81586.47
Add for Air and Water line @	1.00%	Rs:	815.86
Add for Ventilation @	4.50%	Rs:	3671.39
Add for Lighting @	1.60%	Rs:	1305.38
Add for Ele sub-station / Demand charges @	2.50%	Rs:	2039.66
	Total	Rs:	89418.76
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	12174.36
Total cost for	30.00 cum	Rs:	101593.12
Rate per cum	(A+B+C+D)/30.0	Rs:	3386.44

IRR-TAW-1-3 **Excavation for tunnel by tunnelling methods in rock not requiring supports** including cost of all materials, machinery, labour, scaling excavated surface, removing under-cuts, ventilation, lighting, drainage, removing and hauling the excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**



TYPICAL CROSS SECTION OF TUNNEL 4.50 m dia.

DATA:

RATE ANALYSISUNIT : **48.60 cum****A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Small dia explosive	kg	54.00000	73.00	3942.00
2	Delay detonators	Nos	68.00000	24.00	1632.00
3	Electric detonators	Nos	10.00000	12.00	120.00
4	Detonating fuse coil	Rm	50.00000	11.00	550.00
5	Use rate of drill rod 2.5 m long	Rm	150.00000	46.64	6996.00
	Reconditioning charges @	10%			699.60
6	Use rate of air hose	Hour	24.00000	6.09	146.16
7	Use rate of water hose	Hour	24.00000	6.19	148.56
8	Sundries(paint / template etc)	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	14316.32

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling jumbo	Hour	10.00000	389.85	3898.50
	Fuel / Energy charges	Hour	10.00000	72.34	723.40
2	Air compressor 15 cmm (ele)	Hour	6.50000	136.20	885.30
	Fuel / Energy charges	Hour	6.50000	1057.45	6873.43
3	Jack hammer (4 x 6.5 hrs)	Hour	26.00000	19.11	496.86
	Fuel / Energy charges	Hour	26.00000	0.00	0.00
4	Pusher leg	Hour	26.00000	14.83	385.58
	Fuel / Energy charges	Hour	26.00000	0.00	0.00
5	Convey mucker	Hour	6.00000	819.19	4915.14
	Fuel / Energy charges	Hour	6.00000	294.40	1766.40
6	Dumper (2 x 6 hrs)	Hour	12.00000	628.34	7540.08
	Fuel / Energy charges	Hour	12.00000	675.13	8101.56
7	Pump 10 hp (ele)	Hour	6.50000	7.03	45.70
	Fuel / Energy charges	Hour	6.50000	84.60	549.90
8	Ventilation fans 20 hp	Hour	2.00000	12.70	25.40
	Fuel / Energy charges	Hour	2.00000	169.19	338.38
9	Sundries(explosive van / magazine)	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	36627.63

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling jumbo	Hour	10.00000	277.68	2776.80
2	Crew for Air compressor	Hour	6.50000	277.68	1804.92
3	Crew for Jack hammer	Hour	26.00000	520.65	13536.90
4	Crew for Convey mucker	Hour	6.00000	277.68	1666.08
5	Crew for Dumper	Hour	12.00000	354.43	4253.16
6	Crew for Pump	Hour	6.50000	130.08	845.52
7	Crew for ventilation fans	Hour	2.00000	44.87	89.74
8	Surveyor	Day	0.50000	1100.00	550.00
9	Foreman	Day	1.00000	780.00	780.00
10	Fitter / Mechanic	Day	2.00000	720.00	1440.00
11	Blaster (Licensed)	Day	1.00000	780.00	780.00
12	Helper blasting	Day	2.00000	640.00	1280.00
13	Hammerman	Day	2.00000	640.00	1280.00
14	work inspector 1 in each shift	Day	3.00000	775.00	2325.00
15	Khalasi for mucking shift 4 Nos	Day	4.00000	695.00	2780.00
16	mazdoor				
	for mucking shift 8 Nos	Day	8.00000	595.00	4760.00
	for other 2 shifts 1 No each shift	Day	2.00000	595.00	1190.00
	for cleaning & miscellaneous	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	43328.12

labour component/unit qty

891.50

Add contractor's profit and overhead charges

13.615% 121.40

labour component/unit qty (including contractor's profit)

1012.90**ABSTRACT:**

A. Cost of Materials

Rs: 14316.32

B. Hire charges of Machinery

Rs: 36627.63

C. Cost of Labour

Rs: 43328.12

Total Rs: 94272.07

Add for Air and Water line @

1.00%

Rs: 942.72

Add for Ventilation @

4.50%

Rs: 4242.24

Add for Lighting @

1.60%

Rs: 1508.35

Add for Ele sub-station / Demand charges @

2.50%

Rs: 2356.80

Total Rs: 103322.18

D.Add for contractor's profit and overheads on (A+B+C+other percentages)

13.615%

Rs: 14067.31

Total cost for

48.60 cum

Rs: **117389.49****Rate per cum**

(A+B+C+D)/48.60

Rs: **2415.42**

IRR-TAW-1-4 **Excavation for tunnel by tunnelling methods including excavation for supports in all types of soil / rock strata requiring supports (excluding cost of providing supports)** including cost of all other materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage, removing and hauling the excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **46.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Small dia explosive	kg	41.00000	73.00	2993.00
2	Delay detonators	Nos	77.00000	24.00	1848.00
3	Electric detonators	Nos	10.00000	12.00	120.00
4	Detonating fuse coil	Rm	50.00000	11.00	550.00
5	Use rate of drill rod 2.5 m long	Rm	144.00000	46.64	6716.16
	Reconditioning charges @	10%			671.62
6	Use rate of air hose	Hour	24.00000	6.09	146.16
7	Use rate of water hose	Hour	24.00000	6.19	148.56
8	Sundries(paint / template etc)	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	13275.50

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling jumbo	Hour	11.00000	389.85	4288.35
	Fuel / Energy charges	Hour	11.00000	72.34	795.74
2	Air compressor 15 cmm (ele)	Hour	6.00000	136.20	817.20
	Fuel / Energy charges	Hour	6.00000	1057.45	6344.70
3	Jack hammer (4 x 6 hrs)	Hour	24.00000	19.11	458.64
	Fuel / Energy charges	Hour	24.00000	0.00	0.00
4	Pusher leg	Hour	24.00000	14.83	355.92
	Fuel / Energy charges	Hour	24.00000	0.00	0.00
5	Convey mucker	Hour	6.00000	819.19	4915.14
	Fuel / Energy charges	Hour	6.00000	294.40	1766.40
6	Dumper (2 x 6 hrs)	Hour	12.00000	628.34	7540.08
	Fuel / Energy charges	Hour	12.00000	675.13	8101.56
7	Pump 10 hp (ele)	Hour	6.00000	7.03	42.18
	Fuel / Energy charges	Hour	6.00000	84.60	507.60
8	Ventilation fans 20 hp	Hour	2.00000	12.70	25.40
	Fuel / Energy charges	Hour	2.00000	169.19	338.38
9	Sundries(explosive van / magazine)	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	36379.29

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling jumbo	Hour	11.00000	277.68	3054.48
2	Crew for Air compressor	Hour	6.00000	277.68	1666.08
3	Crew for Jack hammer	Hour	24.00000	520.65	12495.60
4	Crew for Convey mucker	Hour	6.00000	277.68	1666.08
5	Crew for Dumper	Hour	12.00000	354.43	4253.16
6	Crew for Pump	Hour	6.00000	130.08	780.48
7	Crew for ventilation fans	Hour	2.00000	44.87	89.74
8	Surveyor	Day	0.50000	1100.00	550.00
9	Foreman	Day	1.00000	780.00	780.00
10	Fitter / Mechanic	Day	2.00000	720.00	1440.00
11	Blaster (Licensed)	Day	1.00000	780.00	780.00
12	Helper blasting	Day	2.00000	640.00	1280.00
13	Hammerman 2 Nos	Day	2.00000	640.00	1280.00
14	work inspector 1 in each shift	Day	3.00000	775.00	2325.00
15	Khalasi for mucking shift 4 Nos	Day	4.00000	695.00	2780.00
16	mazdoor				
	for mucking shift 8 Nos	Day	8.00000	595.00	4760.00
	for other 2 shifts 1 No each shift	Day	2.00000	595.00	1190.00
	for cleaning & miscellaneous	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	42360.62

labour component/unit qty

920.90

Add contractor's profit and overhead charges

13.615% 125.40

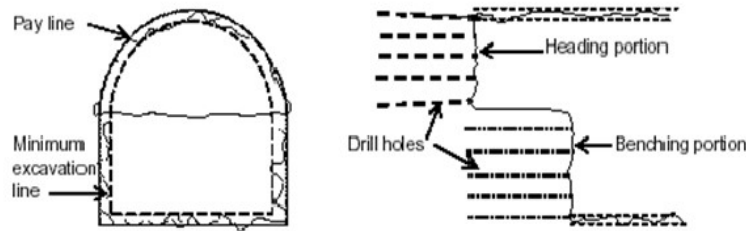
labour component/unit qty (including contractor's profit)

1046.30

ABSTRACT:

A. Cost of Materials		Rs:	13275.50
B. Hire charges of Machinery		Rs:	36379.29
C. Cost of Labour		Rs:	42360.62
	Total	Rs:	92015.41
Add for Air and Water line @	1.00%	Rs:	920.15
Add for Ventilation @	4.50%	Rs:	4140.69
Add for Lighting @	1.60%	Rs:	1472.25
Add for Ele sub-station / Demand charges @	2.50%	Rs:	2300.39
	Total	Rs:	100848.89
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	13730.58
Total cost for	46.00 cum	Rs:	114579.47
Rate per cum	(A+B+C+D)/46.0	Rs:	2490.86

IRR-TAW-1-5 **Excavation for tunnel by heading and benching tunnelling methods including excavation for supports in all types of soil / rock strata requiring supports (excluding cost of providing supports) for roof before benching including cost of all other materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage removing and hauling excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts.**



TYPICAL CROSS SECTION OF TUNNEL FOR HEADING & BENCHING

DATA:

A. MATERIALS:

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Small dia explosive	kg	44.00000	73.00	3212.00
2	Delay detonators	Nos	84.00000	24.00	2016.00
3	Electric detonator	Nos	10.00000	12.00	120.00
4	Detonating fuse coil	Rm	50.00000	11.00	550.00
5	Use rate of drill rod 2.5 m long	Rm	157.00000	46.64	7322.48
	Reconditioning charges @	10%			732.25
6	Use rate of air hose	Hour	26.00000	6.09	158.44
7	Use rate of water hose	Hour	26.00000	6.19	160.88
8	Sundries(paint / template etc)	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	14354.05

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling jumbo	Hour	12.00000	389.85	4678.20
	Fuel / Energy charges	Hour	12.00000	72.34	868.08
2	Air compressor 15 cmm (ele)	Hour	6.50000	136.20	885.30
	Fuel / Energy charges	Hour	6.50000	1057.45	6873.43
3	Jack hammer (4 x 6.5 hrs)	Hour	26.00000	19.11	496.86
	Fuel / Energy charges	Hour	26.00000	0.00	0.00
4	Pusher leg	Hour	26.00000	14.83	385.58
	Fuel / Energy charges	Hour	26.00000	0.00	0.00
5	Convey mucker	Hour	6.50000	819.19	5324.74
	Fuel / Energy charges	Hour	6.50000	294.40	1913.60
6	Dumper (2 x 6.5 hrs)	Hour	13.00000	628.34	8168.42
	Fuel / Energy charges	Hour	13.00000	675.13	8776.69
7	Pump 10 hp (ele)	Hour	6.50000	7.03	45.70
	Fuel / Energy charges	Hour	6.50000	84.60	549.90
8	Ventilation fans 20 hp	Hour	3.00000	12.70	38.10
	Fuel / Energy charges	Hour	3.00000	169.19	507.57
9	Sundries(explosive van / magazine)	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	39594.17

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling jumbo	Hour	12.00000	277.68	3332.16
2	Crew for Air compressor	Hour	6.50000	277.68	1804.92
3	Crew for Jack hammer	Hour	26.00000	520.65	13536.90
4	Crew for Convey mucker	Hour	6.50000	277.68	1804.92
5	Crew for Dumper	Hour	13.00000	354.43	4607.59
6	Crew for Pump	Hour	6.50000	130.08	845.52
7	Crew for Ventilation fan	Hour	3.00000	44.87	134.61
8	Surveyor	Day	0.50000	1100.00	550.00
9	Foreman	Day	1.00000	780.00	780.00
10	Fitter / Mechanic	Day	2.00000	720.00	1440.00
11	Blaster (Licensed)	Day	2.00000	780.00	1560.00
12	Helper blasting	Day	4.00000	640.00	2560.00
13	Hammerman 2 Nos	Day	2.00000	640.00	1280.00
14	work inspector 1 in each shift	Day	3.00000	775.00	2325.00
15	Khalasi				
	for pushing muck in heading portion	Day	4.00000	695.00	2780.00
	for mucking shift 4 Nos	Day	4.00000	695.00	2780.00
16	mazdoor				
	for mucking shift 8 Nos	Day	8.00000	595.00	4760.00
	for other 2 shifts 1 No each shift	Day	2.00000	595.00	1190.00
	for cleaning & miscellaneous	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	49261.62

labour component/unit qty 985.20
 Add contractor's profit and overhead charges 13.615% 134.10
 labour component/unit qty (including contractor's profit) **1119.30**

ABSTRACT:

A. Cost of Materials		Rs:	14354.05
B. Hire charges of Machinery		Rs:	39594.17
C. Cost of Labour		Rs:	49261.62
	Total	Rs:	103209.84
Add for Air and Water line @	1.00%	Rs:	1032.10
Add for Ventilation @	4.50%	Rs:	4644.44
Add for Lighting @	1.60%	Rs:	1651.36
Add for Ele sub-station / Demand charges @	2.50%	Rs:	2580.25
	Total	Rs:	113117.99
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	15401.01
Total cost for	50.00 cum	Rs:	128519.00
Rate per cum	(A+B+C+D)/50.0	Rs:	2570.38

NOTE: Where mucking is to be carried out through shaft using winch and mucking tub system increase the basic rates for items IRR-TAW-1-3, IRR-TAW-1-4 & IRR-TAW-1-5 by 8 percent.

IRR-TAW-1-6 **Removing and hauling muck** overfallen due to natural causes such as geological faults etc., out of tunnel including breaking large fragments by blasting if necessary and disposing off the same in specified dump area or as directed including cost of all materials, machinery, labour, ventilation, drainage, lighting and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**

DATA

RATE ANALYSISUNIT : **100.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of drill rod	Rm	15.00000	31.16	467.40
	Reconditioning charges @	10%			46.74
2	Explosive small dia.	kg	8.00000	73.00	584.00
3	Detonator (ele)	Nos.	30.00000	12.00	360.00
4	Detonating fuse coil	Rm	20.00000	11.00	220.00
5	Use rate of air hose	Hour	4.00000	6.09	24.36
6	Use rate of water hose	Hour	4.00000	6.19	24.76
7	Sundries	LS	1.00000	41.00	41.00
Total cost of Materials				Rs:	1768.26

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Air compressor 15 cmm (ele)	Hour	1.00000	136.20	136.20
	Fuel / Energy charges	Hour	1.00000	1057.45	1057.45
2	Jack hammer	Hour	4.00000	19.11	76.44
	Fuel / Energy charges	Hour	4.00000	0.00	0.00
3	Pump 10 hp (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
4	Convey mucker	Hour	6.00000	819.19	4915.14
	Fuel / Energy charges	Hour	6.00000	294.40	1766.40
5	Dumper 4.5 cum	Hour	12.00000	628.34	7540.08
	Fuel / Energy charges	Hour	12.00000	675.13	8101.56
6	Sundries	LS	1.00000	41.00	41.00
Total hire charges of Machinery				Rs:	23725.90

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Air compressor	Hour	1.00000	277.68	277.68
2	Crew for Jack hammer	Hour	4.00000	520.65	2082.60
3	Crew for Pump	Hour	1.00000	130.08	130.08
4	Crew for Convey mucker	Hour	6.00000	277.68	1666.08
5	Crew for Dumper	Hour	12.00000	354.43	4253.16
6	Blaster (Licensed)	Day	0.50000	780.00	390.00
7	Helper blasting	Day	0.50000	640.00	320.00
8	mazdoor	Day	8.00000	595.00	4760.00
Total cost of Labour				Rs:	13879.60

labour component/unit qty 138.80
 Add contractor's profit and overhead charges 13.615% 18.90
 labour component/unit qty (including contractor's profit) **157.70**

ABSTRACT:

A. Cost of Materials	Rs:	1768.26
B. Hire charges of Machinery	Rs:	23725.90
C. Cost of Labour	Rs:	13879.60
	Total	Rs: 39373.76
Add for Air and Water line @	1.00%	Rs: 393.74
Add for Ventilation @	4.50%	Rs: 1771.82
Add for Lighting @	1.60%	Rs: 629.98
Add for Ele sub-station / Demand charges @	2.50%	Rs: 984.34
	Total	Rs: 43153.64
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs: 5875.37
Total cost for	100.00 cum	Rs: 49029.01
Rate per cum	(A+B+C+D)/100.0	Rs: 490.29

IRR_TAW-2 **DEWATERING & GUNTING WORKS :**

IRR-TAW-2-1 **Dewatering tunnel by pumping out water collected by natural drainage inside tunnel** including providing sump wherever necessary, cost of all materials, machinery, labour, drainage, lighting, ventilation and all other ancillary operations etc., complete.

DATA

RATE ANALYSISUNIT : **15.00 Kwhr****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of G.I.pipe 100 mm dia	Hour	1.00000	7.35	7.35
2	Sundries	LS	0.10000	41.00	4.10
Total cost of Materials				Rs:	11.45

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Electric pump 20 hp	Hour	1.00000	13.18	13.18
2	Fuel / Energy charges	Hour	1.00000	169.19	169.19
3	Sundries(Starter/Switches etc)	LS	0.10000	41.00	4.10
Total hire charges of Machinery				Rs:	186.47

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew charges for Pump	Hour	1.00000	130.08	130.08
2	Laying & dismantling pipe	LS	0.05000	41.00	2.05
3	mazdoor	Day	0.10000	595.00	59.50
Total cost of Labour				Rs:	191.63

labour component/unit qty

12.80

Add contractor's profit and overhead charges

13.615% 1.70

labour component/unit qty (including contractor's profit)

14.50**ABSTRACT:**

A. Cost of Materials

Rs: 11.45

B. Hire charges of Machinery

Rs: 186.47

C. Cost of Labour

Rs: 191.63

Total Rs: **389.55**

Add for Air and Water line @

1.00%

Rs: 3.90

Add for Ventilation @

4.50%

Rs: 17.53

Add for Lighting @

1.60%

Rs: 6.23

Add for Ele sub-station / Demand charges @

2.50%

Rs: 9.74

Total Rs: **426.95**

D.Add for contractor's profit and overheads on (A+B+C+other percentages)

13.615%

Rs: 58.13

Total cost for

15.00 Kwhr

Rs: **485.08****Rate per Kwhr**

(A+B+C+D)/15.0

Rs: **32.34**

IRR-TAW-2-2

Providing 25 mm thick guniting to sides and arch of tunnel in cement mortar 1 : 3 proportion
by weight including cost of all materials, machinery, labour, ventilation, lighting, drainage
and all other ancillary operations etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **36.00 sqm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	600.00000	4.22	2532.00
2	Sand (Screened)	cum	1.10000	728.00	800.80
3	Use rate of grout hose 20 m	Hour	8.00000	6.09	48.72
4	Use rate of water hose 20 m	Hour	8.00000	6.19	49.52
5	Use rate of guniting nozzle	Hour	8.00000	3.89	31.12
6	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	3544.16

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Guniting equipment	Hour	8.00000	123.76	990.08
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
2	Air compressor 8.5 cmm (ele)	Hour	8.00000	172.20	1377.60
	Fuel / Energy charges	Hour	8.00000	475.86	3806.88
3	Pump 10 hp (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
4	Drilling jumbo	Hour	4.00000	389.85	1559.40
	Fuel / Energy charges	Hour	4.00000	72.34	289.36
5	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	8196.95

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Guniting equipment	Hour	8.00000	347.10	2776.80
2	Crew for Air compressor	Hour	8.00000	260.33	2082.64
3	Crew for pump	Hour	1.00000	130.08	130.08
4	Crew for Drilling jumbo	Hour	4.00000	277.68	1110.72
5	Mason Cl I	Day	1.00000	710.00	710.00
6	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	10380.24

labour component/unit qty	288.30
Add contractor's profit and overhead charges	13.615% 39.30
labour component/unit qty (including contractor's profit)	327.60

ABSTRACT:

A. Cost of Materials	Rs:	3544.16
B. Hire charges of Machinery	Rs:	8196.95
C. Cost of Labour	Rs:	10380.24
Total	Rs:	22121.35
Add for Air and Water line @	1.00%	Rs: 221.21
Add for Ventilation @	4.50%	Rs: 995.46
Add for Lighting @	1.60%	Rs: 353.94
Add for Ele sub-station / Demand charges @	2.50%	Rs: 553.03
Total	Rs:	24244.99
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs: 3300.96
Lead Charges for 1 Km for FA	1.10 cum @	43.17 Rs./Cum
Total cost for	36.00 sqm	Rs: 27593.44
Rate per sqm	(A+B+C+D)/36.0	Rs: 766.48

IRR-TAW-2-3 Shortcreting in two layers (each layer+38 mm thickness) for slabs duly fixing chain weld wire mesh
(new4 - 2011-12) 100 x 100x5 mm in between the two layers including cost and conveyance of all materials, labour charges, all heads, lifts, centering, scaffolding, machine mixing, laying concrete with shortcrete machine etc. complete as per specification and as directed by Engineer-in-Charge

Data

RATE ANALYSISUNIT : **36.00 sqm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	1548.00000	4.22	6532.56
2	Sand (Screened)	cum	2.41000	728.00	1754.48
3	Coarse aggregate 10-4.75 mm size	cum	1.03000	1098.00	1130.94
4	Use rate of grout hose 20 m	Hour	8.00000	6.09	48.72
5	Use rate of water hose 20 m	Hour	8.00000	6.19	49.52
6	Use rate of guniting nozzle	Hour	8.00000	3.89	31.12
7	Welded steel wire fabric 100 x 100 x 5 mm	kg	108.00000	217.00	23436.00
8	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	33065.34

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Guniting equipment	Hour	8.00000	123.76	990.08
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
2	Air compressor 8.5 cmm (ele)	Hour	8.00000	172.20	1377.60
	Fuel / Energy charges	Hour	8.00000	475.86	3806.88
3	Pump 10 hp (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
4	Drilling jumbo	Hour	4.00000	389.85	1559.40
	Fuel / Energy charges	Hour	4.00000	72.34	289.36
5	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	8196.95

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Guniting equipment	Hour	8.00000	347.10	2776.80
2	Crew for Air compressor	Hour	8.00000	260.33	2082.64
3	Crew for pump	Hour	1.00000	130.08	130.08
4	Crew for Drilling jumbo	Hour	4.00000	277.68	1110.72
5	Mason Cl I	Day	1.00000	710.00	710.00
6	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	10380.24

labour component/unit qty	288.30
Add contractor's profit and overhead charges	13.615% 39.30
labour component/unit qty (including contractor's profit)	327.60

ABSTRACT:

A. Cost of Materials		Rs:	33065.34
B. Hire charges of Machinery		Rs:	8196.95
C. Cost of Labour		Rs:	10380.24
	Total	Rs:	51642.53
Add for Air and Water line @	1.00%	Rs:	516.43
Add for Ventilation @	4.50%	Rs:	2323.91
Add for Lighting @	1.60%	Rs:	826.28
Add for Ele sub-station / Demand charges @	2.50%	Rs:	1291.06
	Total	Rs:	56600.21
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	7706.12
Lead Charges for 1 Km for FA	2.41 cum @	43.17 Rs./Cum	104.05
Lead Charges for 1 Km for CA	1.03 cum @	41.51 Rs./Cum	42.76
Total cost for	36.00 sqm	Rs:	64453.14
Rate per sqm	(A+B+C+D)/36.0	Rs:	1790.37

IRR_TAW-3 **TEMPORARY & PERMANENT SUPPORTS :**

IRR-TAW-3-1 Providing and **fixing 25 mm diameter steel rock bolts with mechanical / wedge type anchorage** including drilling 35 mm dia holes, providing 15 cm long 20 mm thick steel tapered wedge, 10 mm thick plate washers and nuts, tightening bolt by torque wrench, cost of all materials, machinery, labour, ventilation, lighting, drainage and all other ancillary operations etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **20.00 Rm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rein.Steel with 5 % wastage	kg	86.91375	59.00	5127.91
2	Steel plate for washers	kg	65.94000	66.00	4352.04
	Steel plate for wedges	kg	6.18188	66.00	408.00
3	M S Nuts for bolts	kg	4.00000	96.00	384.00
4	Use rate of drill rod	Rm	20.00000	46.64	932.80
	Reconditioning charges @	10%			93.28
5	Use rate of air hose 4 Nos	Hour	6.00000	6.09	36.54
6	Use rate of water hose 4 Nos	Hour	6.00000	6.19	37.14
7	Sundries (gas for cutting / heating etc)	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	11576.71

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Air compressor 15 cmm (ele)	Hour	1.50000	136.20	204.30
	Fuel / Energy charges	Hour	1.50000	1057.45	1586.18
2	Pump 10 hp (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
3	Jack hammer	Hour	6.00000	19.11	114.66
	Fuel / Energy charges	Hour	6.00000	0.00	0.00
4	Pusher leg	Hour	6.00000	14.83	88.98
	Fuel / Energy charges	Hour	6.00000	0.00	0.00
5	Drilling jumbo	Hour	4.00000	389.85	1559.40
	Fuel / Energy charges	Hour	4.00000	72.34	289.36
6	Sundries (lathe, blower etc)	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	4139.51

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Air compressor	Hour	1.50000	277.68	416.52
2	Crew for pump	Hour	1.00000	130.08	130.08
3	Crew for Jack hammer	Hour	6.00000	520.65	3123.90
4	Crew for Drilling jumbo	Hour	4.00000	277.68	1110.72
5	Fitter	Day	0.50000	720.00	360.00
6	Gas cutter	Day	1.00000	695.00	695.00
7	Turner	Day	1.00000	780.00	780.00
8	Blacksmith	Day	1.00000	670.00	670.00
9	Khalasi (2 x 0.5)	Day	1.00000	695.00	695.00
10	Hammerman	Day	0.50000	640.00	320.00
11	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	9491.22

labour component/unit qty	474.60
Add contractor's profit and overhead charges	13.615% 64.60
labour component/unit qty (including contractor's profit)	539.20

ABSTRACT:

A. Cost of Materials			Rs:	11576.71
B. Hire charges of Machinery			Rs:	4139.51
C. Cost of Labour			Rs:	9491.22
		Total	Rs:	25207.44
Add for Air and Water line @	1.00%		Rs:	252.07
Add for Ventilation @	4.50%		Rs:	1134.33
Add for Lighting @	1.60%		Rs:	403.32
Add for Ele sub-station / Demand charges @	2.50%		Rs:	630.19
		Total	Rs:	27627.35
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%		Rs:	3761.46
Lead Charges for 1Km for Steel (including Loading and Unloading Charges)	0.16	tonne @	279.49	44.45
			Rs./Tonne	
Total cost for	20.00	Rm	Rs:	31433.26
Rate per Rm	(A+B+C+D)/20.0		Rs:	1571.66

IRR-TAW-3-2 Providing and **fixing 25 mm diameter steel rock bolts with resin bond cement capsule anchorage** including drilling 35 mm dia holes, inserting grout capsule, driving bolt, fixing 10 mm thick plate washers and nuts and tightening the same by torque wrench after hardening of cement grout, cost of all materials, machinery, labour, ventilation, lighting, drainage and other ancillary operations etc., **complete with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **20.00 Rm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rein.Steel with 5 % wastage	kg	86.91375	59.00	5127.91
2	Steel plate for washers	kg	65.94000	66.00	4352.04
3	Resin bond cement grout capsule	Nos.	2.00000	61.00	122.00
4	M S Nuts for bolts	kg	4.00000	96.00	384.00
5	Use rate of drill rod	Rm	20.00000	46.64	932.80
	Reconditioning charges @	10%			93.00
6	Use rate of air hose 4 Nos	Hour	6.00000	6.09	36.54
7	Use rate of water hose 4 Nos	Hour	6.00000	6.19	37.14
8	Sundries(gas for cutting etc)	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	11208.43

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Air compressor 15 cmm (ele)	Hour	1.50000	136.20	204.30
	Fuel / Energy charges	Hour	1.50000	1057.45	1586.18
2	Pump 10 hp (ele)	Hour	1.00000	7.03	7.03
	Fuel / Energy charges	Hour	1.00000	84.60	84.60
3	Jack hammer	Hour	6.00000	19.11	114.66
	Fuel / Energy charges	Hour	6.00000	0.00	0.00
4	Pusher leg	Hour	6.00000	14.83	88.98
	Fuel / Energy charges	Hour	6.00000	0.00	0.00
5	Drilling jumbo	Hour	4.00000	389.85	1559.40
	Fuel / Energy charges	Hour	4.00000	72.34	289.36
6	Sundries (lathe, etc)	LS	3.00000	41.00	123.00
Total hire charges of Machinery				Rs:	4057.51

C. LABOUR:

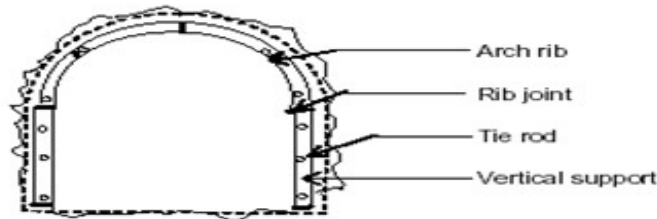
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Air compressor	Hour	1.50000	277.68	416.52
2	Crew for pump	Hour	1.00000	130.08	130.08
3	Crew for Jack hammer	Hour	6.00000	520.65	3123.90
4	Crew for Drilling jumbo	Hour	4.00000	277.68	1110.72
5	Fitter	Day	0.50000	640.00	320.00
6	Gas cutter	Day	1.00000	695.00	695.00
7	Turner	Day	1.00000	780.00	780.00
8	Khalasi (2 x 0.5)	Day	1.00000	695.00	695.00
9	Hammerman	Day	0.50000	640.00	320.00
10	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	8781.22

labour component/unit qty	439.10
Add contractor's profit and overhead charges	13.615% 59.80
labour component/unit qty (including contractor's profit)	498.90

ABSTRACT:

A. Cost of Materials		Rs:	11208.43
B. Hire charges of Machinery		Rs:	4057.51
C. Cost of Labour		Rs:	8781.22
	Total	Rs:	24047.16
Add for Air and Water line @	1.00%	Rs:	240.47
Add for Ventilation @	4.50%	Rs:	1082.12
Add for Lighting @	1.60%	Rs:	384.75
Add for Ele sub-station / Demand charges @	2.50%	Rs:	601.18
	Total	Rs:	26355.68
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	3588.33
Lead Charges for 1Km for Steel (including Loading and Unloading Charges)	0.15 tonne @	279.49 Rs./Tonne	42.72
Total cost for	20.00 Rm	Rs:	29986.73
Rate per Rm	(A+B+C+D)/20.0	Rs:	1499.34

IRR-TAW-3-3 Providing, fabricating and **fixing in position permanent structural steel supports as per details** including cost of all materials, machinery, labour, cutting, bending, welding, grinding, lighting, ventilation, drainage and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**



TYPICAL SKETCH SHOWING TUNNEL SUPPORTS

A.

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel beams	kg	760.00000	60.00	45600.00
2	Structural steel plates	kg	115.00000	66.00	7590.00
3	Steel bars for tie rods & anchors	kg	150.00000	59.00	8850.00
4	For cutting sections:				
	Oxygen gas @ 2.4 cum / t	cum	2.40000	48.00	115.20
	Acetylene gas @ 0.8 cum / t	cum	0.80000	390.00	312.00
5	For welding sections:				
	Electrodes 4 x 300 mm @ 125 Nos / t	Nos.	125.00000	17.00	2125.00
6	For field connections:				
	M.S Bolts / Nuts & Washers	kg	50.00000	96.00	4800.00
7	Sundries	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	69597.20

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Bending machine	Hour	8.00000	43.53	348.24
	Fuel / Energy charges	Hour	8.00000	126.90	1015.20
2	Welding set	Hour	16.00000	17.29	276.64
	Fuel / Energy charges	Hour	16.00000	101.52	1624.32
3	Drilling Jumbo	Hour	12.00000	389.85	4678.20
	Fuel / Energy charges	Hour	12.00000	72.34	868.08
4	Sundries (lathe / drilling / grinder)	LS	30.00000	41.00	1230.00
Total hire charges of Machinery				Rs:	10040.68

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling Jumbo	Hour	12.00000	277.68	3332.16
2	Crew for Bending machine	Hour	8.00000	208.26	1666.08
3	For cutting & preparing sections:				
	Structural steel Marker	Day	1.00000	850.00	850.00
	Gas cutter	Day	2.00000	695.00	1390.00
	Fitter	Day	2.00000	720.00	1440.00
	Turner / Driller	Day	3.00000	780.00	2340.00
	Khalasi	Day	2.00000	695.00	1390.00
	Helper fabrication	Day	4.00000	640.00	2560.00
4	For welding sections:				
	Welder	Day	2.00000	695.00	1390.00
	Helper fabrication	Day	2.00000	640.00	1280.00
	Khalasi	Day	2.00000	695.00	1390.00
5	For erection of supports:				
	Foreman	Day	1.00000	780.00	780.00
	Structural steel Erector	Day	2.00000	850.00	1700.00
	Helper erector	Day	2.00000	640.00	1280.00
	Khalasi	Day	4.00000	695.00	2780.00
Total cost of Labour				Rs:	25568.24

labour component/unit qty

25568.20

Add contractor's profit and overhead charges

13.615% 3481.10

labour component/unit qty (including contractor's profit)

29049.30**ABSTRACT:**

A. Cost of Materials

Rs: 69597.20

B. Hire charges of Machinery

Rs: 10040.68

C. Cost of Labour

Rs: 25568.24

Total Rs: 105206.12

Add for Air and Water line @

1.00%

Rs: 1052.06

Add for Ventilation @

4.50%

Rs: 4734.28

Add for Lighting @

1.60%

Rs: 1683.30

Add for Ele sub-station / Demand charges @

2.50%

Rs: 2630.15

Total Rs: 115305.91

D. Add for contractor's profit and overheads on (A+B+C+other percentages)

13.615%

Rs: 15698.90

Lead Charges for 1Km for Steel (including Loading and Unloading Charges)

1.03 tonne @ '9.49 Rs./Tonne 286.48

Total cost for

1.00 tonne Rs: **131291.29****Rate per tonne**(A+B+C+D)/1.0 Rs: **131291.29**

IRR-TAW-3-4 Providing, fabricating and **fixing in position temporary structural steel supports as per details** and dismantling the same before concreting including cost of all materials, machinery, labour, cutting, bending, welding, grinding, ventilation, lighting, drainage and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**

DATA

RATE ANALYSISUNIT : **1.00 tonne**

A. MATERIALS (for 20 uses):

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel beams	kg	760.00000	60.00	45600.00
2	Structural steel plates	kg	115.00000	66.00	7590.00
3	Tie rods & anchors	kg	150.00000	59.00	8850.00
4	For cutting sections:				
	Oxygen gas @ 2.40 cum / t	cum	2.40000	48.00	115.20
	Acetylene @ 0.8 cum / t	cum	0.80000	390.00	312.00
5	For welding sections:				
	Electrodes @ 125 Nos / t	Nos.	125.00000	17.00	2125.00
6	For field connections:				
	M.S Bolts / Nuts / Washers	kg	50.00000	96.00	4800.00
7	Sundries	LS	20.00000	41.00	820.00
Total cost of Materials for 20 uses of supports				Rs:	70212.20
Cost per use considering 20 uses				Rs:	3510.61

B. MACHINERY (for fabrication):

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Bending machine	Hour	8.00000	43.53	348.24
	Fuel / Energy charges	Hour	8.00000	126.90	1015.20
2	Welding set	Hour	16.00000	17.29	276.64
	Fuel / Energy charges	Hour	16.00000	101.52	1624.32
3	Sundries	LS	30.00000	41.00	1230.00
Total hire charges of Machinery				Rs:	4494.40
Cost per use considering 20 uses				Rs:	224.72

B. MACHINERY (for erection and dismantling):

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling Jumbo	Hour	18.00000	389.85	7017.30
	Fuel / Energy charges	Hour	18.00000	72.34	1302.12
2	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	8729.42

C. LABOUR (for fabrication):

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Bending machine	Hour	8.00000	208.26	1666.08
2	For cutting & preparing sections:				
	Structural steel Marker	Day	1.00000	850.00	850.00
	Gas cutter	Day	2.00000	695.00	1390.00
	Fitter	Day	2.00000	720.00	1440.00
	Turner / Driller	Day	3.00000	780.00	2340.00
	Khalasi	Day	2.00000	695.00	1390.00
	Helper fabrication	Day	4.00000	640.00	2560.00
3	For welding sections:				
	Welder	Day	2.00000	695.00	1390.00
	Helper fabrication	Day	2.00000	640.00	1280.00
	Khalasi	Day	2.00000	695.00	1390.00
Total cost of Labour				Rs:	15696.08
Cost per use considering 20 uses				Rs:	784.80

C. LABOUR (for erection):

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling jumbo	Hour	8.00000	277.68	2221.44
2	For erection of supports:				
	Foreman	Day	1.00000	780.00	780.00
	Structural steel Erector	Day	2.00000	850.00	1700.00
	Helper erector	Day	2.00000	640.00	1280.00
	Khalasi	Day	4.00000	695.00	2780.00
3	For dismantling of supports:				
	Foreman	Day	0.50000	780.00	390.00
	Structural steel Erector	Day	1.00000	850.00	850.00
	Helper erector	Day	1.00000	640.00	640.00
	Khalasi	Day	2.00000	695.00	1390.00
Total cost of Labour				Rs:	12031.44

labour component/unit qty	12816.20
Add contractor's profit and overhead charges	13.615% 1744.90
labour component/unit qty (including contractor's profit)	14561.10

ABSTRACT:

A. Cost of Materials		Rs:	3510.61
B. Hire charges of Machinery for fabrication		Rs:	224.72
C. Hire charges of Machinery for erection and dismantling		Rs:	8729.42
D. Cost of Labour for fabrication		Rs:	784.80
E. Cost of Labour for erection and dismantling		Rs:	12031.44
	Total	Rs:	25280.99
Add for Air and Water line @	1.00%	Rs:	252.81
Add for Ventilation @	4.50%	Rs:	1137.64
Add for Lighting @	1.60%	Rs:	404.50
Add for Ele sub-station / Demand charges @	2.50%	Rs:	632.02
	Total	Rs:	27707.96
D.Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	3772.44
Lead Charges for 1Km for Steel (including Loading and Unloading Charges)	1.03 tonne @	Rs./Tonne	279.49
Total cost for	1.00 tonne	Rs:	31766.88
Rate per tonne	(A+B+C+D)/1.0	Rs:	31766.88

IRR-TAW-3-5 Providing and fixing hard variety cut jungle wood for lagging / blocking locations in tunnel wherever required including cost of all materials, machinery, labour, fixing in position, lighting, ventilation, drainage etc complete with all leads and lifts.

DATA: **RATE ANALYSIS** UNIT : **1.00 cum**

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cut jungle wood	cum	1.05000	22224.00	23335.20
2	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	23417.20

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling jumbo	Hour	2.00000	389.85	779.70
	Fuel / Energy charges	Hour	2.00000	72.34	144.68
Total hire charges of Machinery				Rs:	924.38

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling jumbo	Hour	2.00000	277.68	555.36
2	Carpenter Cl II	Day	1.00000	640.00	640.00
3	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	2385.36

labour component/unit qty 2385.40
 Add contractor's profit and overhead charges 13.615% 324.80
 labour component/unit qty (including contractor's profit) **2710.20**

ABSTRACT:

A. Cost of Materials	Rs:	23417.20
B. Hire charges of Machinery	Rs:	924.38
C. Cost of Labour	Rs:	2385.36
	Total	Rs: 26726.94
Add for Air and Water line @	1.00%	Rs: 267.27
Add for Ventilation @	4.50%	Rs: 1202.71
Add for Lighting @	1.60%	Rs: 427.63
Add for Ele sub-station / Demand charges @	2.50%	Rs: 668.17
	Total	Rs: 29292.72
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs: 3988.20
Total cost for	1.00 cum	Rs: 33280.92
Rate per cum	(A+B+C+D)/1.0	Rs: 33280.92

IRR_TAW-4 **MASONRY WORKS :**

IRR-TAW-4-1 Providing and **constructing un-coursed rubble stone masonry with approved stones** from **tunnel excavated muck in cement mortar 1 : 6** proportion for backfilling over cuts / slips on tunnel sides due to geological faults etc., including cost of all materials, machinery, labour, cleaning, scaffolding, packing mortar, wedging stone chips, curing, ventilation, lighting, drainage complete **with lead upto 1 km and all lifts.**
(cement content : 95 kg/cum of masonry, Rubble stones : 0.83 cum, Stone chips : 0.13 cum, FA : 0.40 cum)

DATA: **RATE ANALYSIS** UNIT : **10.00 cum**

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	950.00000	4.22	4009.00
2	Rubble stones	cum	8.30000	395.00	3278.50
3	Stone chips	cum	1.25000	466.00	582.50
4	Sand (Screened)	cum	4.00000	728.00	2912.00
TOTAL				Rs:	10782.00
Add for scaffolding @				2.5%	Rs: 269.55
Total cost of Materials				Rs:	11051.55

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	10 hp pump (ele)	Hour	1.00000	7.03	7.03
	Fuel / energy charges	Hour	1.00000	84.60	84.60
Total hire charges of Machinery				Rs:	91.63

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Pump	Hour	1.00000	130.08	130.08
2	work inspector	Day	1.00000	775.00	775.00
3	Mason Class-I	Day	1.00000	710.00	710.00
4	Mason Class-II	Day	2.00000	640.00	1280.00
5	mazdoor				
	for sorting out rubble in dump yard	Day	1.00000	595.00	595.00
	for conveying rubble	Day	2.00000	595.00	1190.00
	for preparing mortar	Day	2.00000	595.00	1190.00
	for loading mortar pans	Day	1.00000	595.00	595.00
	for laying & packing mortar	Day	4.00000	595.00	2380.00
	for washing rubble / finishing / curing	Day	1.00000	595.00	595.00
	for conveying mortar / chips	Day	3.00000	595.00	1785.00
TOTAL				Rs:	11225.08
Add for labour for scaffolding @				15.0%	Rs: 1683.76
Total cost of Labour				Rs:	12908.84

labour component/unit qty 1290.88

Add contractor's profit and overhead charges 13.615% 175.80

labour component/unit qty (including contractor's profit) **1466.70****ABSTRACT:**

A. Cost of Materials	Rs:	11051.55
B. Hire charges of Machinery	Rs:	91.63
C. Cost of Labour	Rs:	12908.84

Total Rs: 24052.02

Add for Air and Water line @ 1.00% Rs: 240.52

Add for Ventilation @ 4.50% Rs: 1082.34

Add for Lighting @ 1.60% Rs: 384.83

Add for Ele sub-station / Demand charges @ 2.50% Rs: 601.30

Total Rs: 26361.01

D.Add for contractor's profit and overheads on (A+B+C+other percentages) 13.615% Rs: 3589.05

Lead Charges for 1 Km for FA 4.00 cum @ 43.17 Rs./Cum 172.69

Lead Charges for 1 Km for Stones and Stone Chip: 9.55 cum @ 41.51 Rs./Cum 396.47

Total cost for 10.00 cum Rs: **30519.22****Rate per cum (A+B+C+D)/10.0 Rs: 3051.92**IRR_TAW-5 **REINFORCEMENT & CONCRETE WORKS :**

IRR-TAW-5-1 Providing, fabricating and **placing in position reinforcement steel for tunnel RCC works** including cleaning, straightening, cutting, bending, hooking, lapping / welding joints wherever required, tying with 1.25 mm dia.soft annealed steel wire, including cost of all materials, labour, machinery, ventilation, lighting, drainage etc.,complete **with initial lead upto 1 km and all lifts.**

DATA

RATE ANALYSISUNIT : **1.00 tonne****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rein.Steel with 5 % wastage	tonne	1.05000	59000.00	61950.00
2	Binding wire 1.25 mm dia	kg	13.50000	64.00	864.00
3	Sundries (chairs / spacers etc)	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	63019.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Bar bender	Day	9.00000	850.00	7650.00
2	mazdoor	Day	15.00000	595.00	8925.00
Total cost of Labour				Rs:	16575.00

labour component/unit qty 16575.00

Add contractor's profit and overhead charges 13.615% 2256.70

labour component/unit qty (including contractor's profit) **18831.70**

ABSTRACT:

A. Cost of Materials		Rs:	63019.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	16575.00
	Total	Rs:	79594.00
Add for Air and Water line @	1.00%	Rs:	795.94
Add for Ventilation @	4.50%	Rs:	3581.73
Add for Lighting @	1.60%	Rs:	1273.50
Add for Ele sub-station / Demand charges @	2.50%	Rs:	1989.85
	Total	Rs:	87235.02
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	11877.05
Lead Charges for 1Km for Steel (including Loading and Unloading Charges)	1.05 tonne @	279.4929 Rs./T	293.47
Total cost for	1.00 tonne	Rs:	99405.54
Rate per tonne	(A+B+C+D)/1.0	Rs:	99405.54

IRR-TAW-5-2 Providing and laying **insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates crushed from tunnel excavated muck **for filling and levelling over-cuts in bed due to geological faults etc.,** including cost of all materials, machinery, labour, cleaning bed, batching, mixing, conveying and laying, levelling, compacting, finishing, curing, lighting, ventilation, drainage etc., complete **with initial lead upto 1 km and all lifts. (Cement content : 220 kg / cum, CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum, Superplasticizer 0.4% by wt. of cement)**

DATA

RATE ANALYSISUNIT : **28.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	6160.00000	4.22	25995.20
2	Coarse aggregate 40-20 mm	cum	12.60000	1441.00	18156.60
	Coarse aggregate 20-10 mm	cum	7.56000	1508.00	11400.48
	Coarse aggregate 10 mm below	cum	5.04000	1098.00	5533.92
3	Fine aggregate (Un-Screened)	cum	11.20000	605.00	6776.00
4	Super Plasticizer	kg	24.64000	63.00	1552.32
5	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	69496.52

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Batching plant 2 x 1 cum	Hour	8.00000	396.19	3169.52
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
2	Agitator car 2 cum	Hour	16.00000	794.00	12704.00
	Fuel / Energy charges	Hour	16.00000	1473.48	23575.68
3	10 hp pump (ele)	Hour	8.00000	7.03	56.24
	Fuel / Energy charges	Hour	8.00000	84.60	676.80
4	Needle vibrator 40 mm dia	Hour	8.00000	8.01	64.08
	Fuel / Energy charges	Hour	8.00000	8.46	67.68
5	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	43441.52

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Agitator car	Hour	16.00000	443.04	7088.64
3	Crew for Pump	Hour	8.00000	130.08	1040.64
4	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
5	Mason Class-I	Day	1.00000	710.00	710.00
6	work inspector	Day	1.00000	775.00	775.00
7	mazdoor				
	for cleaning bed	Day	2.00000	595.00	1190.00
	for loading material bin (Cement)	Day	3.00000	595.00	1785.00
	for miscellaneous works at BP	Day	2.00000	595.00	1190.00
	for laying concrete	Day	7.00000	595.00	4165.00
	for conveying laying concrete	Day	14.00000	595.00	8330.00
	for cleaning bed	Day	2.00000	595.00	1190.00
	for washing CA / curing	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	34935.40

labour component/unit qty 1247.70
Add contractor's profit and overhead charges 13.615% 169.90
labour component/unit qty (including contractor's profit) **1417.60**

ABSTRACT:

A. Cost of Materials				Rs:	69496.52
B. Hire charges of Machinery				Rs:	43441.52
C. Cost of Labour				Rs:	34935.40
			Total	Rs:	147873.44
Add for Air and Water line @	1.00%			Rs:	1478.73
Add for Ventilation @	4.50%			Rs:	6654.30
Add for Lighting @	1.60%			Rs:	2365.98
Add for Ele sub-station / Demand charges @	2.50%			Rs:	3696.84
			Total	Rs:	162069.29
Cost for contractors profit and overheads (13.615 percentages)	13.615%			Rs:	22065.73
Lead Charges for 1 Km for FA	11.20	cum @	43.17 Rs./Cum		483.55
Lead Charges for 1 Km for CA	25.20	cum @	41.51 Rs./Cum		1046.18
Total cost for	28.00 cum			Rs:	185664.75
Rate per cum	(A+B+C+D)/28.0			Rs:	6630.88

IRR-TAW-5-3 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sqmm) grade **cement concrete using 40 mm and down size** approved clean, hard, graded aggregates crushed from tunnel muck **for kerb and bed lining** including cost of all materials, machinery, labour, formwork, batching, mixing, conveying upto placing point in agitator cars, placing in position, levelling, vibrating, finishing, curing, ventilation, lighting, drainage and all other ancillary operations etc., complete **with lead upto 1 km and all lifts.**
(Cement content 330 kg / cum for use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA

RATE ANALYSISUNIT : **28.00 cum****A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement 43 Gr	kg	9240.00000	4.22	38992.80
	Cement for incidentals @ 1 kg / cum	kg	28.00000	4.22	118.16
2	Fine aggregate (Un-Screened)	cum	11.20000	605.00	6776.00
3	Coarse aggregate 40-20 mm	cum	12.60000	1441.00	18156.60
	Coarse aggregate 20-10 mm	cum	7.56000	1508.00	11400.48
	Coarse aggregate 10-4.75 mm	cum	5.04000	1098.00	5533.92
4	Super plasticiser	kg	36.96000	63.00	2328.48
5	Use rate of shuttering for kerb / bed	sqm	28.00000	235.50	6594.00
6	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	89982.44

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Batching plant 2 x 1.00 cum	Hour	8.00000	396.19	3169.52
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
2	Agitator car 2 cum (2 Nos)	Hour	16.00000	794.00	12704.00
	Fuel / Energy charges	Hour	16.00000	1473.48	23575.68
3	Needle Vibrator	Hour	8.00000	8.01	64.08
	Fuel / Energy charges	Hour	8.00000	8.46	67.68
4	Pump 10 hp (Ele)	Hour	8.00000	7.03	56.24
	Fuel / Energy charges	Hour	8.00000	84.60	676.80
5	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	43564.52

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Agitator car	Hour	16.00000	443.04	7088.64
3	Crew for vibrator	Hour	8.00000	249.86	1998.88
4	Crew for pump	Hour	8.00000	130.08	1040.64
5	For scaling & cleaning bed				
	Hammerman	Day	2.00000	640.00	1280.00
	mazdoor	Day	6.00000	595.00	3570.00
6	For loading cement to BP bin				
	mazdoor	Day	3.00000	595.00	1785.00
7	For miscellaneous work at BP				
	mazdoor	Day	2.00000	595.00	1190.00
8	For wetting C.A & curing				
	mazdoor	Day	2.00000	595.00	1190.00
9	Laying concrete for kerb/ invert				
	Mason CI I	Day	2.00000	710.00	1420.00
	Mason CI II	Day	2.00000	640.00	1280.00
	mazdoor	Day	21.00000	595.00	12495.00
	work inspector	Day	1.00000	775.00	775.00
10	Labour charges for shuttering	sqm	28.0000	146.85	4111.80
Total cost of Labour				Rs:	43507.20

labour component/unit qty 1553.80
Add contractor's profit and overhead charges 13.615% 211.50
labour component/unit qty (including contractor's profit) **1765.30**

ABSTRACT:

A. Cost of Materials		Rs:	89982.44
B. Hire charges of Machinery		Rs:	43564.52
C. Cost of Labour		Rs:	43507.20
	Total	Rs:	177054.16
Add for Air and Water line @	1.00%	Rs:	1770.54
Add for Ventilation @	4.50%	Rs:	7967.44
Add for Lighting @	1.60%	Rs:	2832.87
Add for Ele sub-station / Demand charges @	2.50%	Rs:	4426.35
	Total	Rs:	194051.36
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	26420.09
Lead Charges for 1 Km for FA	11.20 cum @	43.1737 Rs./Cu	483.55
Lead Charges for 1 Km for CA	25.20 cum @	41.514921 Rs./t	1046.18
Total cost for	28.00 cum	Rs:	222001.18
Rate per cum	(A+B+C+D)/28.0	Rs:	7928.61

IRR-TAW-5-4 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sqmm) grade cement concrete using **40 mm and down size** approved clean, hard, graded aggregates crushed from tunnel muck for **sides and arch lining** including cost of all materials, machinery, labour, formwork, batching, mixing, conveying upto placing point in agitator cars, placing in position, levelling, vibrating, finishing, curing, ventilation, lighting, drainage and all other ancillary operations etc., complete **with lead upto 1 km and all lifts.**
(Cement content 330 kg / cum for use of super plasticiser(0.4% by wt. of cement), CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)



DATA:



1	Cement 43 Gr	kg	15840.00000	4.22	66844.80
	Cement for incidentals @ 1 kg / cum	kg	48.00000	4.22	202.56
2	Fine aggregate (Un-Screened)	cum	19.20000	605.00	11616.00
3	Coarse aggregate 40-20 mm	cum	21.60000	1441.00	31125.60
	Coarse aggregate 20-10 mm	cum	12.96000	1508.00	19543.68
	Coarse aggregate 10-4.75 mm	cum	8.64000	1098.00	9486.72
4	Super plasticiser	kg	63.36000	63.00	3991.68
5	Use rate of end shuttering	sqm	6.00000	235.50	1413.00
6	Use rate of steel gantry	sqm	100.00000	146.85	14685.00
7	Sundries (placer pipe etc)	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	159114.04

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Air compressor (Ele) 8.5 cmm	Hour	16.00000	172.20	2755.20
	Fuel / Energy charges @ 75 % load	Hour	12.00000	475.86	5710.32
2	Batching plant 2 x 1.00 cum	Hour	12.00000	396.19	4754.28
	Fuel / Energy charges	Hour	12.00000	380.69	4568.28
3	Agitator car 2 cum (2 Nos)	Hour	32.00000	794.00	25408.00
	Fuel / Energy charges	Hour	32.00000	1473.48	47151.36
4	Concrete placer pump	Hour	16.00000	943.97	15103.52
	Fuel / Energy charges	Hour	16.00000	507.58	8121.28
5	Needle Vibrator / Shutter vibrator	Hour	8.00000	8.01	64.08
	Fuel / Energy charges	Hour	8.00000	8.46	67.68
6	Pump 10 hp (Ele)	Hour	8.00000	7.03	56.24
	Fuel / Energy charges	Hour	8.00000	84.60	676.80
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	114642.04

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew charges for Air compressor	Hour	16.00000	260.33	4165.28
2	Crew charges for Batching plant	Hour	16.00000	535.28	8564.48
3	Crew charges for Agitator car	Hour	32.00000	443.04	14177.28
4	Crew charges for placer pump	Hour	16.00000	260.33	4165.28
5	Crew charges for vibrator	Hour	8.00000	249.86	1998.88
6	Crew charges for Pump	Hour	8.00000	130.08	1040.64
7	For scaling & cleaning				
	Stone chiseller Cl II	Day	0.50000	640.00	320.00
	mazdoor	Day	1.00000	595.00	595.00
8	For dismantling / Laying track				
	Surveyer	Day	0.50000	1100.00	550.00
	Fitter shuttering	Day	0.50000	640.00	320.00
	Helper shuttering 2 x 0.5	Day	1.00000	640.00	640.00
	Khalasi 6 x 0.5	Day	3.00000	695.00	2085.00
	mazdoor 2 x 0.5	Day	1.00000	595.00	595.00
9	For Moving / Positioning gantry				
	Surveyer	Day	0.50000	1100.00	550.00
	Foreman	Day	0.50000	780.00	390.00
	Fitter shuttering	Day	0.50000	640.00	320.00
	Helper shuttering 2 x 0.5	Day	1.00000	640.00	640.00
	Khalasi 6 x 0.5	Day	3.00000	695.00	2085.00
	mazdoor 2 x 0.5	Day	1.00000	595.00	595.00
10	For loading cement to BP bin				
	mazdoor	Day	5.00000	595.00	2975.00
11	For miscellaneous works of BP				
	mazdoor	Day	2.00000	595.00	1190.00
12	For Erection/Dismantling bulk head	sqm	6.00000	146.85	881.10
13	For Laying concrete by placer				
	Masom Cl I	Day	3.00000	710.00	2130.00
	mazdoor	Day	9.00000	595.00	5355.00
	work inspector	Day	3.00000	775.00	2325.00
14	For wetting C.A / Curing etc				
	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	60437.94

labour component/unit qty	1259.10
Add contractor's profit and overhead charges	13.615% 171.40
labour component/unit qty (including contractor's profit)	1430.50

ABSTRACT:

A. Cost of Materials				Rs:	159114.04
B. Hire charges of Machinery				Rs:	114642.04
C. Cost of Labour				Rs:	60437.94
			Total	Rs:	334194.02
Add for Air and Water line @	1.00%			Rs:	3341.94
Add for Ventilation @	4.50%			Rs:	15038.73
Add for Lighting @	1.60%			Rs:	5347.10
Add for Ele sub-station / Demand charges @	2.50%			Rs:	8354.85
			Total	Rs:	366276.64
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%			Rs:	49868.56
Lead Charges for 1 Km for FA	19.20	cum @	43.17 Rs./Cum		828.94
Lead Charges for 1 Km for CA	43.20	cum @	41.51 Rs./Cum		1793.44
Total cost for	48.00	cum		Rs:	418767.58
Rate per cum	(A+B+C+D)/48.0			Rs:	8724.32

IRR-TAW-6

DRILLING & GROUTING WORKS :

IRR-TAW-6-1

Drilling 32 mm diameter grout holes in concrete / rock by percussion drilling using jack hammer or stooper drills as directed to specified depth for consolidation / contact grouting including cost of all materials, machinery, labour, cleaning holes, ventilation, lighting, drainage and all other ancillary operations etc., complete.

DATA:

RATE ANALYSISUNIT : **100.00 Rm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of drill rod	Rm	100.00000	46.64	4664.00
	Reconditioning charges @	10%			466.40
2	Use rate of air hose 4 Nos	Hour	32.00000	6.09	194.88
3	Use rate of water hose 4 Nos	Hour	32.00000	6.19	198.08
4	Sundries	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	5646.36

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Air compressor 15 cmm (ele)	Hour	8.00000	136.20	1089.60
	Fuel / Energy charges	Hour	8.00000	1057.45	8459.60
2	Pump 10 hp (ele)	Hour	4.00000	7.03	28.12
	Fuel / Energy charges	Hour	4.00000	84.60	338.40
3	Jack hammer	Hour	32.00000	19.11	611.52
	Fuel / Energy charges	Hour	32.00000	0.00	0.00
4	Pusher leg	Hour	32.00000	14.83	474.56
	Fuel / Energy charges	Hour	32.00000	0.00	0.00
5	Drilling jumbo	Hour	8.00000	389.85	3118.80
	Fuel / Energy charges	Hour	8.00000	72.34	578.72
6	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	14904.32

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew charges for Air compressor	Hour	8.00000	277.68	2221.44
2	Crew charges for Pump	Hour	4.00000	130.08	520.32
3	Crew charges for Jack Hammer	Hour	32.00000	520.65	16660.80
4	Crew charges for Drilling Jumbo	Hour	8.00000	277.68	2221.44
5	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	22814.00

labour component/unit qty 228.10
 Add contractor's profit and overhead charges 13.615% 31.10
 labour component/unit qty (including contractor's profit) 259.20

ABSTRACT:

A. Cost of Materials		Rs:	5646.36
B. Hire charges of Machinery		Rs:	14904.32
C. Cost of Labour		Rs:	22814.00
		Total	Rs: 43364.68
Add for Air and Water line @	1.00%	Rs:	433.65
Add for Ventilation @	4.50%	Rs:	1951.41
Add for Lighting @	1.60%	Rs:	693.83
Add for Ele sub-station / Demand charges @	2.50%	Rs:	1084.12
		Total	Rs: 47527.69
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	6470.89
Total cost for	100.00 Rm	Rs:	53998.58
Rate per Rm	(A+B+C+D)/100.0	Rs:	539.99

IRR-TAW-6-2 **Grouting cement slurry in grout holes** under specified pressure for consolidation / contact grouting including cost of all materials, machinery, labour, redrilling wherever necessary, ventilation, lighting, drainage and other ancillary operations etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **1.50 tonne****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	tonne	1.50000	4220.00	6330.00
2	Use rate of grouting hose 50 m	Hour	8.00000	12.19	97.52
3	Use rate of water hose 50 m	Hour	8.00000	12.38	99.04
4	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	6608.56

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Grouting machine	Hour	8.00000	23.95	191.60
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
2	Pump 10 hp (ele)	Hour	2.00000	7.03	14.06
	Fuel / Energy charges	Hour	2.00000	84.60	169.20
3	Drilling jumbo	Hour	2.00000	389.85	779.70
	Fuel / Energy charges	Hour	2.00000	72.34	144.68
4	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	1719.64

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Grout pump	Hour	8.00000	416.52	3332.16
2	Crew for pump	Hour	2.00000	130.08	260.16
3	Crew for Drilling jumbo	Hour	2.00000	277.68	555.36
4	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	5337.68

labour component/unit qty	3558.50
Add contractor's profit and overhead charges	13.615% 484.50
labour component/unit qty (including contractor's profit)	4043.00

ABSTRACT:

A. Cost of Materials		Rs:	6608.56
B. Hire charges of Machinery		Rs:	1719.64
C. Cost of Labour		Rs:	5337.68
		Total	Rs: 13665.88
Add for Air and Water line @	1.00%	Rs:	136.66
Add for Ventilation @	4.50%	Rs:	614.96
Add for Lighting @	1.60%	Rs:	218.65
Add for Ele sub-station / Demand charges @	2.50%	Rs:	341.65
		Total	Rs: 14977.80
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	2039.23
Total cost for	1.50 tonne	Rs:	17017.03
Rate per tonne	(A+B+C+D)/1.50	Rs:	11344.69

IRR-TAW-6-3 **Drilling 75 mm diameter drainage holes** vertical or inclined in **rock / concrete** in tunnel by percussion drilling using waggon drill or other suitable drilling equipment including cost of all materials, machinery, labour, ventilation, lighting, drainage etc., complete.

DATA

RATE ANALYSISUNIT : **120.00 Rm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of cross bit 75 mm dia	Rm	120.00000	153.91	18469.20
2	Use rate of air hose 20 m	Hour	16.00000	4.88	78.08
3	Use rate of water hose 20 m	Hour	16.00000	4.95	79.20
4	Use rate of extension rods	Rm	120.00000	9.48	1137.60
Total cost of Materials				Rs:	19764.08

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Waggon drill	Hour	16.00000	199.88	3198.08
	Fuel / Energy charges	Hour	16.00000	0.00	0.00
2	Air compressor 15 cmm (ele)	Hour	8.00000	136.20	1089.60
	Fuel / Energy charges	Hour	8.00000	1057.45	8459.60
3	Pump 10 hp (ele)	Hour	6.00000	7.03	42.18
	Fuel / Energy charges	Hour	6.00000	84.60	507.60
4	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	13379.06

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Waggon drill	Hour	16.00000	443.04	7088.64
2	Crew for Air compressor	Hour	8.00000	277.68	2221.44
3	Crew for Pump	Hour	6.00000	130.08	780.48
4	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	11280.56

labour component/unit qty

94.00

Add contractor's profit and overhead charges

13.615% 12.80

labour component/unit qty (including contractor's profit)

106.80**ABSTRACT:**

A. Cost of Materials

Rs: 19764.08

B. Hire charges of Machinery

Rs: 13379.06

C. Cost of Labour

Rs: 11280.56

Total Rs: 44423.70

Add for Air and Water line @

1.00%

Rs: 444.24

Add for Ventilation @

4.50%

Rs: 1999.07

Add for Lighting @

1.60%

Rs: 710.78

Add for Ele sub-station / Demand charges @

2.50%

Rs: 1110.59

Total Rs: 48688.38

D. Add for contractor's profit and overheads on (A+B+C+other percentages)

13.615%

Rs: 6628.92

Total cost for

120.00 Rm

Rs: **55317.30****Rate per Rm**

(A+B+C+D)/120.0

Rs: **460.98**

Chapter III

CANAL AND ALLIED WORKS - Standard Data

(WILL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)
FOR THE YEAR : 2024-25

Index- code
IRR-CAW

CANAL AND ALLIED WORKS - DATA RATES

Directions to add Seigniorage Charges and Additional Lead Charges

Seigniorage Charges:

1. The unit rate for work item in the Standard Data is **exclusive of Seigniorage Charges** wherever applicable.
2. The appropriate Seigniorage Charges for relevant materials are to be added in the Part-B of the estimate

Additional Lead and Lift Charges:

1. Unless otherwise specified the basic rates are inclusive of all lifts.
2. For concrete, masonry and reinforcement items **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:

Additional lead charges for Steel, sand, coarse aggregate, stones and stone chips shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.

In case of Cement and Steel, Loading and unloading charges are already added in the work item while arriving the unit rate and hence should not be added again

Example:

Total lead for sand from approved sand quarry :

Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) :

Additional lead charges :	Lead charges for 5 km	Rs.	115.13	15 Km
	Lead charges for next 10 km	Rs.	172.69	1 Km
	Total lead charges for 15 km /cum	Rs.	287.82	
	Less 1 km initial lead charges /cum	Rs.	43.17 (-)	
	Net additional lead charges / cum	Rs.	244.65	

3. The Leads for Steel shall be from the nearest market place to the Project area

4. For earth/rockfill embankments **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:

Additional lead charges for Earth, Murrum etc., shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item. (same as above)

Example:

Total lead for earth from approved borrow area :

Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) :

Additional lead charges :	Lead charges for 5 km	Rs.	115.13	15 Km
	Lead charges for next 10 km	Rs.	172.69	1 Km
	Total lead charges for 15 km /cum	Rs.	287.82	
	Less 1 km initial lead charges /cum	Rs.	43.17 (-)	
	Net additional lead charges / cum	Rs.	244.65	

5. The initial lead up to 50 m as mentioned in some standard data items is meant for manual lead within the working area. For conveyance of materials, the lead required from quarry/Borrow area/ Dump Area to worksite shall be added to the data without deducting the 50 m initial lead charges

CAW - Work Items

IRR-CAW-1 EXCAVATION WORKS :

IRR-CAW-1-1 Excavation in **all kinds of soil** including boulders upto 0.3 m diameter for canal, seating of embankment, filter drains / catch water drains etc., including dressing bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated soil neatly in dump area or for the formation of service road / embankment as directed etc., complete **with initial lead upto 1 km and all lifts**.

DATA: RATE ANALYSIS UNIT : 925.00 cum

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
2	Tipplers 5 cum capacity 6 Nos	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
Total hire charges of Machinery				Rs:	73304.80

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	Crew for Tipper	Hour	48.00000	276.90	13291.20
3	work inspector	Day	1.00000	775.00	775.00
4	mazdoor	Day	30.00000	595.00	17850.00
Total cost of Labour				Rs:	34869.80

labour component/unit qty	37.70
Add contractor's profit and overhead charges	13.615% 5.10
labour component/unit qty (including contractor's profit)	42.80

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	73304.80
C. Cost of Labour	Rs:	34869.80
Total	Rs:	108174.60

D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	14727.97
Total cost for	925.00 cum	Rs:	122902.57
Rate per cum	(A+B+C+D)/925	Rs.	132.87

IRR-CAW-1-2 Excavation in **all kinds of soil** including boulders **upto 0.30 m dia for field channels**, seating of embankment for field channels etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road / embankment as directed etc., complete **with lead upto 10 m and lift upto 3 m.**

DATA:

RATE ANALYSISUNIT : **440.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
Total hire charges of Machinery				Rs:	14816.56

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	17.00000	595.00	10115.00
Total cost of Labour				Rs:	13843.60

labour component/unit qty	31.50
Add contractor's profit and overhead charges	13.615% 4.30
labour component/unit qty (including contractor's profit)	35.80

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	14816.56
C. Cost of Labour	Rs:	13843.60
Total	Rs:	28660.16

D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	3902.08
Total cost for	440.00 cum	Rs:	32562.24
Rate per cum	(A+B+C+D)/440	Rs.	74.01

IRR-CAW-1-3 Excavation in **ordinary rock (including HDR) without blasting** including boulders **above 0.30 m upto 0.6 m dia.** for canals, seating of embankment, filter drain / catch water drains etc., including dressing of bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated soft rock neatly in dump area or for formation of service road as directed etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **630.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
2	Tipplers 5 cum capacity 5 Nos	Hour	40.00000	483.37	19334.80
	Fuel / Energy charges	Hour	40.00000	506.34	20253.60
Total hire charges of Machinery				Rs:	65387.12

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	Crew for Tipper	Hour	40.00000	276.90	11076.00
3	work inspector	Day	1.00000	775.00	775.00
4	Crowbarman	Day	11.00000	640.00	7040.00
5	mazdoor	Day	22.00000	595.00	13090.00
Total cost of Labour				Rs:	34934.60

labour component/unit qty 55.50
 Add contractor's profit and overhead charges 13.615% 7.60
 labour component/unit qty (including contractor's profit) **63.10**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	65387.12
C. Cost of Labour	Rs:	34934.60
Total	Rs:	100321.72
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 13658.8
Total cost for	630.00 cum	Rs: 113980.52
Rate per cum	(A+B+C+D)/630	Rs. 180.92

IRR-CAW-1-4 Excavation in **ordinary rock (including HDR) without blasting** including boulders **above 0.3 m upto 0.60 m dia.** for field channels, seating of embankment **for field channels** etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road as directed etc., complete **with lead upto 10 m and lift upto 3 m.**

DATA:

RATE ANALYSISUNIT : **265.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
Total hire charges of Machinery				Rs:	14816.56

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	work inspector	Day	1.00000	775.00	775.00
3	Crowbarman	Day	5.00000	640.00	3200.00
4	mazdoor	Day	11.00000	595.00	6545.00
Total cost of Labour				Rs:	13473.60

labour component/unit qty 50.80
 Add contractor's profit and overhead charges 13.615% 6.90
 labour component/unit qty (including contractor's profit) **57.70**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	14816.56
C. Cost of Labour	Rs:	13473.60
Total	Rs:	28290.16
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 3851.71
Total cost for	265.00 cum	Rs: 32141.87
Rate per cum	(A+B+C+D)/265	Rs. 121.29

IRR-CAW-1-5 Excavation in **hard rock (including F&F rock) requiring blasting** including boulders **above 0.6 m upto 1.2 m dia. for canals**, seating of embankment, filter drain / catch water drains etc., including dressing bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated rock in dump area or for formation of service road as directed etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

805.00 cum

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of drill rod 1.5 m length	Rm	316.00000	23.37	7384.92
	Reconditioning charges @ 10%				738.49
2	Use rate of 50 m air hose 2 Nos	Hour	24.00000	12.19	292.56
3	Explosive small dia (Kelvex-220)	kg	161.00000	73.00	11753.00
4	Ordinary detonators	Nos	12.00000	9.00	108.00
5	Electric detonators	Nos	215.00000	12.00	2580.00
6	Fuse coil	Rm	520.00000	11.00	5720.00
7	Sundries	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	28781.97

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
2	Tipplers 5 cum capacity 5 Nos.	Hour	40.00000	483.37	19334.80
	Fuel / Energy charges	Hour	40.00000	506.34	20253.60
3	Air compressor 8.5 cmm (diesel)	Hour	12.00000	280.01	3360.12
	Fuel / Energy charges	Hour	12.00000	1506.96	18083.52
4	Jack hammers 3 Nos.	Hour	39.00000	19.11	745.29
	Fuel / Energy charges	Hour	39.00000	0.00	0.00
Total hire charges of Machinery				Rs:	87576.05

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	Crew for Tipper	Hour	40.00000	276.90	11076.00
3	Crew for Air compressor	Hour	12.00000	333.22	3998.64
4	Crew for Jack hammer	Hour	39.00000	520.65	20305.35
5	work inspector	Day	1.00000	775.00	775.00
6	Blastrer	Day	1.00000	780.00	780.00
7	Helper blaster	Day	1.00000	640.00	640.00
8	Crowbarman	Day	16.00000	640.00	10240.00
9	Stone breaker	Day	16.00000	640.00	10240.00
10	mazdoor	Day	32.00000	595.00	19040.00
Total cost of Labour				Rs:	80048.59

labour component/unit qty

99.40

Add contractor's profit and overhead charges

13.615% 13.50

labour component/unit qty (including contractor's profit)

112.90**ABSTRACT:**

A. Cost of Materials

Rs: 28781.97

B. Hire charges of Machinery

Rs: 87576.05

C. Cost of Labour

Rs: 80048.59

Total Rs: 196406.61

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 26740.76

Total cost for

805.00 cum

Rs: **223147.37****Rate per cum**

(A+B+C+D)/805

Rs. **277.20**

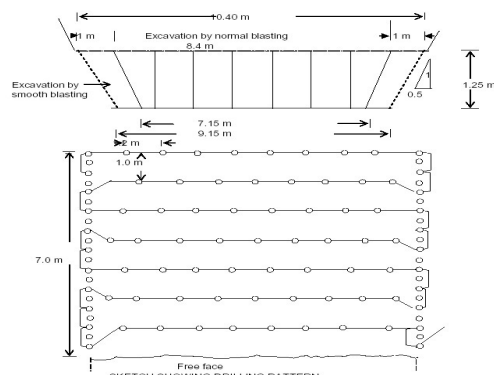
IRR-CAW-1-6

(a)

Excavation in hard rock of all toughness by blasting including boulders above 1.2 m dia. for canals, seating of embankment, filter drain / catch water drains etc., including levelling the bed by removing all projections by hammering / chiselling, cost of all materials, machinery, labour, placing the excavated rock neatly in approved dump area and levelling the same as directed etc., complete with initial lead upto 1 km and all lifts.

Note:

- i) The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth of excavation in hard rock is less than 3 m.
ii) The rate includes levelling canal bed by hammering / chiselling all rock projections wherever required.



DATA:

SKETCH SHOWING DRILLING PATTERN

RATE ANALYSIS

UNIT :

68.00 cum

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of drill rod 1.5 m length	Rm	85.00000	31.16	2648.60
	Reconditioning charges @	10%			264.86
2	Use rate of 50 m air hose 2 Nos.	Hour	13.00000	12.19	158.47
3	Explosive small dia. (Kelvex-220)	kg	21.20000	73.00	1547.60
4	Ordinary detonators	Nos	4.00000	9.00	36.00
5	Electric detonators	Nos	59.00000	12.00	708.00
6	Fuse coil	Rm	90.00000	11.00	990.00
7	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	6435.53

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shovel 0.85 cum capacity	Hour	1.10000	1751.36	1926.50
	Fuel / energy charges	Hour	1.10000	1473.48	1620.83
2	Angle dozer 90 hp	Hour	0.25000	1651.08	412.77
	Fuel / Energy charges	Hour	0.25000	1030.76	257.69
3	Tipplers 5 cum capacity 4 Nos.	Hour	4.40000	483.37	2126.83
	Fuel / Energy charges	Hour	4.40000	506.34	2227.90
4	Air compressor 8.5 cmm (diesel) 1 Nos	Hour	6.50000	280.01	1820.07
	Fuel / Energy charges	Hour	6.50000	1506.96	9795.24
5	Jack hammers 2 Nos.	Hour	13.00000	19.11	248.43
	Fuel / Energy charges	Hour	13.00000	0.00	0.00
Total hire charges of Machinery				Rs:	20436.26

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Shovel	Hour	1.10000	369.20	406.12
2	Crew for Dozer	Hour	0.25000	369.20	92.30
3	Crew for Tipper	Hour	4.40000	276.90	1218.36
4	Crew for Air compressor	Hour	6.50000	333.22	2165.93
5	Crew for Jack hammer	Hour	13.00000	520.65	6768.45
6	work inspector	Day	0.50000	775.00	387.50
7	Blaster	Day	1.00000	780.00	780.00
8	Helper blaster	Day	1.00000	640.00	640.00
9	Crowbarman	Day	0.50000	640.00	320.00
10	Stone breaker	Day	0.50000	640.00	320.00
11	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	14288.66

labour component/unit qty

210.10

Add contractor's profit and overhead charges

13.615% 28.60

labour component/unit qty (including contractor's profit)

238.70

ABSTRACT:

A. Cost of Materials

Rs: 6435.53

B. Hire charges of Machinery

Rs: 20436.26

C. Cost of Labour

Rs: 14288.66

Total Rs: 41160.45

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 5604

Total cost for

68.00 cum

Rs: 46764.45

Rate per cum

(A+B+C+D)/68

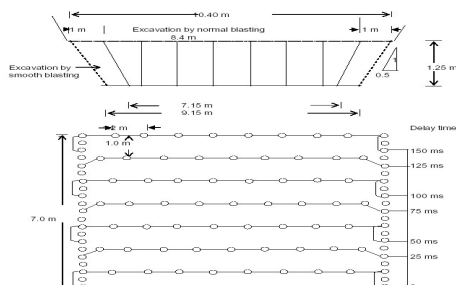
Rs. 687.71

IRR-CAW-1-7
(b)

Excavation in hard rock of all toughness including boulders above 1.2 m dia. by approved controlled blasting methods for canals, cut-off trench of embankment, filter / catch-water drains etc., including controlling fly-rock by muffling arrangements such as placing 50 x 50 mm opening chain link mesh or waste tyres and sand bags, monitoring ground vibrations at specified locations, cost of all materials, machinery, labour, placing excavated rock neatly in approved dump area or other place as directed etc., complete with lead upto 1 km and all lifts.

Note:

- i) The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth of excavation in hard rock is less than 3 m.
ii) The rate under this item shall be adopted where the control of fly-rock and ground vibrations is required.



DATA



UNIT : 68.00 cum

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of drill rod 1.5 m length	Rm	85.00000	31.16	2648.60
	Reconditioning charges @	10%			264.86
2	Use rate of 50 m air hose 2 Nos.	Hour	13.00000	12.19	158.47
3	Use rate of wire mesh	sqm	94.00000	64.13	6028.22
4	Use rate of sand bag	Nos	98.00000	31.40	3077.20
5	Explosive small dia. (Kelvex-220)	kg	21.20000	73.00	1547.60
6	Ordinary detonators	Nos	4.00000	9.00	36.00
7	Electric delay detonators	Nos	59.00000	24.00	1416.00
8	Fuse coil	Rm	90.00000	11.00	990.00
9	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	16248.95

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shovel 0.85 cum capacity	Hour	1.10000	1751.36	1926.50
	Fuel / Energy charges	Hour	1.10000	1473.48	1620.83
2	Angle dozer 90 hp	Hour	0.25000	1651.08	412.77
	Fuel / Energy charges	Hour	0.25000	1030.76	257.69
3	Tipppers 5 cum capacity 3 Nos.	Hour	4.40000	483.37	2126.83
	Fuel / Energy charges	Hour	4.40000	506.34	2227.90
4	Air compressor 8.5 cmm (diesel) 1 No	Hour	6.50000	280.01	1820.07
	Fuel / Energy charges	Hour	6.50000	1506.96	9795.24
5	Jack hammers 2 Nos.	Hour	13.00000	19.11	248.43
	Fuel / Energy charges	Hour	13.00000	0.00	0.00
Total hire charges of Machinery				Rs:	20436.26

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Shovel	Hour	1.10000	369.20	406.12
2	Crew for Angle dozer	Hour	0.25000	369.20	92.30
3	Crew for Tipper	Hour	4.40000	276.90	1218.36
4	Crew for Air compressor	Hour	6.50000	333.22	2165.93
5	Crew for Jack hammer	Hour	13.00000	520.65	6768.45
6	work inspector	Day	0.50000	775.00	387.50
7	Blaster	Day	0.50000	780.00	390.00
8	Helper blaster	Day	0.50000	640.00	320.00
9	Stone chiseller CI - II	Day	0.50000	640.00	320.00
10	Stone breaker	Day	0.50000	640.00	320.00
11	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	14173.66

labour component/unit qty 208.40
 Add contractor's profit and overhead charges 13.615% 28.40
 labour component/unit qty (including contractor's profit) 236.80

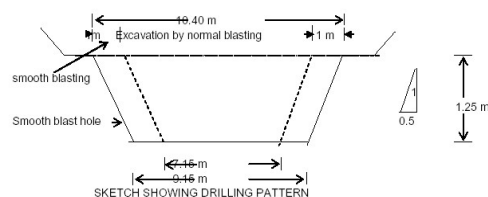
ABSTRACT:

A. Cost of Materials	Rs:	16248.95
B. Hire charges of Machinery	Rs:	20436.26
C. Cost of Labour	Rs:	14173.66
Add for blasting studies & monitoring vibrations etc 0.50%	Total Rs:	50858.87
	Rs:	254.29
D. Add for contractor's profit and overheads on (A+B+C+blasting study charges) 13.615%	Total Rs:	51113.16
Total cost for 68.00 cum	Rs:	6959.06
Rate per cum (A+B+C+D)/68	Rs:	58072.22
	Rs:	854.00

IRR-CAW-1-8
(c)

Excavation in hard rock of all toughness including boulders above 1.2 m dia. for dressing canal sides neatly on either side to required profile by line drilling and smooth blasting including removing under-cuts by chiselling / hammering, placing the excavated rock neatly in dump area or other place as directed, cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts.

- Note:**
- For excavation of canal below free board level combination of normal / controlled blasting and line drilling and smooth blasting shall be adopted to obtain neat side slopes. For the purpose of payment 1 m width of excavation on either side shall be treated as excavation by line drilling and smooth blasting and remaining portion shall be treated as excavation by normal / controlled blasting as the case may be.
 - The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth of excavation in hard rock is less than 3 m.
 - The rate includes controlling fly-rock wherever required.
 - The rate under this item shall be paid only on ascertaining that the excavated face has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval.
 - In case, where the above criteria is not fulfilled payment shall be restricted to rate provided for excavation by normal blasting or controlled blasting as the case may be.



DATA

A. MATERIALS:				UNIT : 17.50 cum	
Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of drill rod 1.5 m length	Rm	63.00000	31.16	1963.08
	Reconditioning charges @	10%			196.31
2	Use rate of 50 m air hose 2 Nos.	Hour	10.00000	12.19	121.90
3	Explosive small dia. (Kelvex-220)	kg	3.50000	73.00	255.50
4	Electric delay detonators	Nos	22.00000	24.00	528.00
5	Fuse coil	Rm	20.00000	11.00	220.00
6	Sundries	LS	1.00000	41.00	41.00
Total cost of Materials				Rs:	3325.79

B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shovel 0.85 cum capacity	Hour	0.28000	1751.36	490.38
	Fuel / Energy charges	Hour	0.28000	1473.48	412.57
2	Tipper 5 cum capacity 4 Nos.	Hour	1.12000	483.37	541.37
	Fuel / Energy charges	Hour	1.12000	506.34	567.10
3	Air compressor 8.5 cmm (diesel) 1 Nos	Hour	5.00000	280.01	1400.05
	Fuel / Energy charges	Hour	5.00000	1506.96	7534.80
4	Jack hammers 2 Nos.	Hour	10.00000	19.11	191.10
	Fuel / Energy charges	Hour	10.00000	0.00	0.00
Total hire charges of Machinery				Rs:	11137.37

C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Shovel	Hour	0.50000	369.20	184.60
2	Crew for Tipper	Hour	1.12000	276.90	310.13
3	Crew for Air compressor	Hour	5.00000	333.22	1666.10
4	Crew for Jack hammer	Hour	10.00000	520.65	5206.50
5	work inspector	Day	0.50000	775.00	387.50
6	Blaster	Day	0.50000	780.00	390.00
7	Helper blaster	Day	0.50000	640.00	320.00
8	Stone breaker	Day	0.50000	640.00	320.00
9	Stone chiseller Cl - II	Day	0.50000	640.00	320.00
10	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	9699.83

labour component/unit qty 554.30
 Add contractor's profit and overhead charges 13.615% 75.50
 labour component/unit qty (including contractor's profit) **629.80**

ABSTRACT:

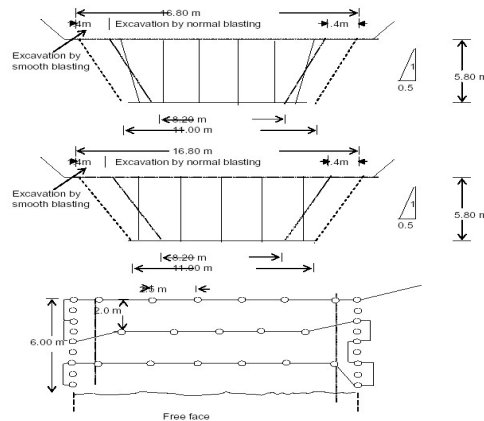
A. Cost of Materials	Rs:	3325.79
B. Hire charges of Machinery	Rs:	11137.37
C. Cost of Labour	Rs:	9699.83
	Total	Rs: 24162.99
Add for blasting studies & monitoring vibrations etc 0.50%		Rs: 120.81
	Total	Rs: 24283.80
D. Add for contractor's profit and overheads on (A+B+C+blasting study charges) 13.615%		Rs: 3306.24
Total cost for 17.50 cum		Rs: 27590.04
Rate per cum (A+B+C+D)/17.50		Rs: 1576.57

- IRR-CAW-1-9 Excavation in **hard rock by blasting** including boulders above 1.2 m dia. for canals, seating embankment etc., including levelling bed by removing all projections by hammering / chiselling.
- (a) cost of all materials, machinery, labour, placing the excavated rock neatly in approved dump area and levelling the same as directed etc., complete with **initial lead upto 1 km and all lifts**.

Note:

i) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m.

ii) The rate includes levelling canal bed by hammering / chiselling all rock projections wherever required.



DATA:

Unit: **386.00 Cum**

SI No	SKETCH SHOWING DRILLING PATTERN particulars	UNIT	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of T.C bit 100 mm dia	Rm	104.00000	181.18	18842.72
2	Use rate of Extension rod with coupling sleeve	Rm	104.00000	7.11	739.44
3	Use rate of Jack hammer drill rod 1.5 m	Rm	12.00000	31.16	373.92
	reconditioning charges @	10%			37.39
4	Use rate of 50 m air hose for waggon drill	Hour	10.50000	18.44	193.62
	Use rate of 25 m air hose for JH 2 Nos	Hour	1.00000	12.19	12.19
5	High strength ANFO booster	kg	38.00000	73.00	2774.00
6	ANFO	kg	155.00000	47.00	7285.00
7	Diesel oil	ltr	35.00000	97.42	3409.70
8	Explosive small dia (Kelvex-220)	kg	4.00000	73.00	292.00
9	Ordinary detonators	Nos	20.00000	9.00	180.00
10	D-cord	Rm	145.00000	9.00	1305.00
11	Detonating fuse coil	Rm	20.00000	11.00	220.00
12	Sundries	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	35869.98

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tipper 5 cum capacity	Hour	24.84000	483.37	12006.91
	Fuel / Energy charges	Hour	24.84000	506.34	12577.49
2	Shovel 0.85 cum capacity	Hour	6.21000	1751.36	10875.95
	Fuel / Energy charges	Hour	6.21000	1473.48	9150.31
3	Angle dozer	Hour	2.00000	1651.08	3302.16
	Fuel / Energy charges	Hour	2.00000	1030.76	2061.52
4	Air compressor 8.5 cmm (diesel)	Hour	11.50000	280.01	3220.12
	Fuel / Energy charges	Hour	11.50000	1506.96	17330.04
5	Waggon drill	Hour	10.50000	199.88	2098.74
	Fuel / Energy charges	Hour	10.50000	0.00	0.00
6	Jack hammer	Hour	2.00000	19.11	38.22
	Fuel / Energy charges	Hour	2.00000	0.00	0.00
Total hire charges of Machinery				Rs:	72661.46

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Tipper	Hour	24.84000	276.90	6878.20
2	Crew for Shovel	Hour	6.21000	369.20	2292.73
3	Crew for Dozer	Hour	2.00000	369.20	738.40
4	Crew for Air compressor	Hour	11.50000	333.22	3832.03
5	Crew for Waggon drill	Hour	10.50000	443.04	4651.92
6	Crew for Jack hammer	Hour	2.00000	520.65	1041.30
7	work inspector	Day	2.00000	775.00	1550.00
8	Blaster	Day	1.00000	780.00	780.00
9	Helper blaster	Day	1.00000	640.00	640.00
10	Stone chiseller Cl - II	Day	1.00000	640.00	640.00
11	Stone breaker	Day	1.00000	640.00	640.00
12	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	25469.58

labour component/unit qty

66.00

Add contractor's profit and overhead charges

13.615% 9.00

labour component/unit qty (including contractor's profit)

75.00**ABSTRACT:**

A. Cost of Materials

Rs: 35869.98

B. Hire charges of Machinery

Rs: 72661.46

C. Cost of Labour

Rs: 25469.58

Total Rs: **134001.02**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 18244.24

Total cost for

386.00 Cum

Rs: **152245.26****Rate per Cum**

(A+B+C+D)/386

Rs. **394.42**

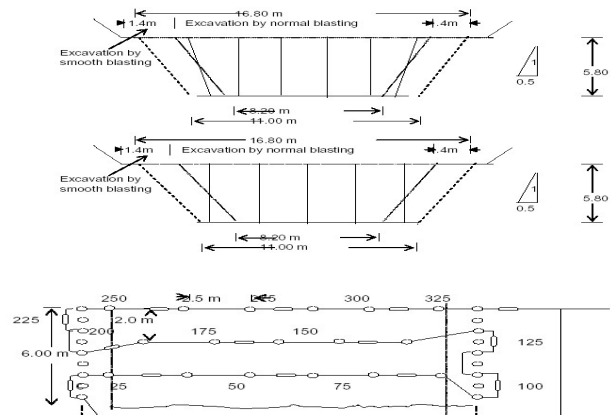
IRR-CAW-1-10

(b)

Excavation in hard rock of all toughness including boulders above 1.2 m dia. by approved controlled blasting methods for canals, cut-off trench of embankment etc., including controlling fly-rock by muffling arrangements such as placing 50 x 50 mm opening chain link mesh or waste tyres and sand bags, monitoring ground vibrations at specified locations, cost of all materials, machinery, labour, placing excavated rock neatly in approved dump area or other place as directed etc., complete with lead upto 1 km and all lifts.

Note:

- i) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m.
 ii) The rate under this item shall be adopted where the control of fly-rock and ground vibrations is required.



DATA

Free face Numbers 0 , 25 , 50 upto 325 indicate trunk delays SKETCH SHOWING DRILLING PATTERN					
SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of T.C bit 100 mm dia	Rm	104.00000	181.18	18842.72
2	Use rate of Extension rod with coupling sleeve	Rm	104.00000	7.11	739.44
3	Use rate of Jack hammer drill rod 1.6 m	Rm	12.00000	31.16	373.92
	reconditioning charges @ 10%				37.39
4	Use rate of 50 m air hose 50 mm 1 No.	Hour	10.50000	18.44	193.62
	Use rate of 25 mm air hose 2 Nos	Hour	2.00000	12.19	24.38
5	High strength ANFO booster	kg	38.00000	73.00	2774.00
6	ANFO	kg	155.00000	47.00	7285.00
7	Diesel oil	ltr	35.00000	97.42	3409.70
8	Explosive small dia (Kelvex-220)	kg	4.00000	73.00	292.00
9	Ordinary detonators	Nos	20.00000	9.00	180.00
10	Shock tube detonators	Rm	120.00000	43.00	5160.00
11	Noiseless trunk line delays	Nos	12.00000	23.00	276.00
12	Detonating fuse coil	Rm	20.00000	11.00	220.00
13	Use rate of chain link wire mesh	sqm	132.00000	205.20	27086.40
14	Use rate of sand bag	Nos	110.00000	31.40	3454.00
15	Sundries	LS	20.00000	41.00	820.00
Total cost of Materials				Rs:	71168.57

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tipper 5 cum capacity	Hour	30.00000	483.37	14501.10
	Fuel / Energy charges	Hour	30.00000	506.34	15190.20
2	Shovel 0.85 cum capacity	Hour	10.00000	1751.36	17513.60
	Fuel / Energy charges	Hour	10.00000	1473.48	14734.80
3	Angle dozer	Hour	2.00000	1651.08	3302.16
	Fuel / Energy charges	Hour	2.00000	1030.76	2061.52
4	Air compressor 8.5 cmm (diesel)	Hour	12.50000	280.01	3500.13
	Fuel / Energy charges	Hour	12.50000	1506.96	18837.00
5	Waggon drill	Hour	11.50000	199.88	2298.62
	Fuel / Energy charges	Hour	11.50000	0.00	0.00
6	Jack hammer	Hour	2.00000	19.11	38.22
	Fuel / Energy charges	Hour	2.00000	0.00	0.00
Total hire charges of Machinery				Rs:	91977.35

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Tipper	Hour	30.00000	276.90	8307.00
2	Crew for Shovel	Hour	10.00000	369.20	3692.00
3	Crew for Dozer	Hour	2.00000	369.20	738.40
4	Crew for Air compressor	Hour	12.50000	333.22	4165.25
5	Crew for Waggon drill	Hour	11.50000	443.04	5094.96
6	Crew for Jack hammer	Hour	2.00000	520.65	1041.30
7	work inspector	Day	1.50000	775.00	1162.50
8	Blaster	Day	0.50000	780.00	390.00
9	Helper blaster	Day	0.50000	640.00	320.00
10	Stone chiseller CI - II	Day	1.00000	640.00	640.00
11	Stone breaker	Day	1.00000	640.00	640.00
12	mazdoor	Day	5.00000	595.00	2975.00
Total cost of Labour				Rs:	29166.41

labour component/unit qty

75.60

Add contractor's profit and overhead charges

13.615% 10.30

labour component/unit qty (including contractor's profit)

85.90**ABSTRACT:**

A. Cost of Materials

Rs: 71168.57

B. Hire charges of Machinery

Rs: 91977.35

C. Cost of Labour

Rs: 29166.41

Add for blasting studies & monitoring vibrations etc

0.50%

Total Rs: 192312.33

Rs: 961.56

D. Add for contractor's profit and overheads on (A+B+C+blasting study charges)

13.615%

Total Rs: 193273.89

Rs: 26314.24

Total cost for

386.00 cum

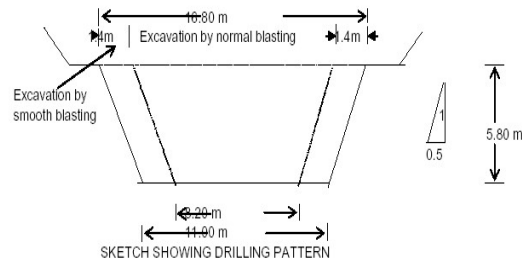
Rs: **219588.13****Rate per cum**

(A+B+C+D)/386

Rs: **568.88**IRR-CAW-1-11
(c)

Excavation in hard rock of all toughness including boulders above 1.2 m dia. for dressing canal sides neatly on either side to required profile by line drilling and smooth blasting including removing under-cuts by chiselling / hammering, placing the excavated rock neatly in dump area or other place as directed, cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts.

- Note:**
- i) For excavation of canal below free board level combination of normal / controlled blasting and line drilling and smooth blasting shall be adopted to obtain neat side slopes. For the purpose of payment 1 m width of excavation on either side shall be treated as excavation by line drilling and smooth blasting and remaining portion shall be treated as excavation by normal / controlled blasting as the case may be.
 - ii) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m.
 - iii) The rate includes controlling fly-rock wherever required.
 - iv) The rate under this item shall be paid only on ascertaining that the excavated face has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval.
 - v) In case, where the above criteria is not fulfilled payment shall be restricted to rate provided for excavation by normal blasting or controlled blasting as the case may be.



DATA

UNIT : 97.00 cum

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of T.C bit 100 mm dia	Rm	121.00000	181.18	21922.78
2	Use rate of Extension rod with coupling sleeve	Rm	121.00000	7.11	860.31
3	Use rate of Jack hammer drill rod 1.6 m	Rm	3.00000	31.16	93.48
	reconditioning charges @ 10%				9.35
4	Use rate of 50 m air hose 50 mm 1 No.	Hour	12.00000	18.44	221.28
	Use rate of 25 mm air hose 2 Nos	Hour	0.50000	12.19	6.10
5	High strength ANFO booster	kg	5.00000	73.00	365.00
6	ANFO	kg	19.00000	47.00	893.00
7	Diesel oil	ltr	4.50000	97.42	438.39
8	Explosive small dia (Kelvex-220)	kg	1.00000	73.00	73.00
9	Ordinary detonators	Nos	5.00000	9.00	45.00
10	Detonating shock tube	Rm	70.00000	43.00	3010.00
11	Noiseless trunk line delays	Nos	4.00000	23.00	92.00
12	Fuse coil	Rm	10.00000	11.00	110.00
13	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	28221.69

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tippers 5 cum capacity	Hour	6.24000	483.37	3016.23
	Fuel / Energy charges	Hour	6.24000	506.34	3159.56
2	Shovel 0.85 cum capacity	Hour	1.56000	1751.36	2732.12
	Fuel / Energy charges	Hour	1.56000	1473.48	2298.63
3	Angle dozer	Hour	0.50000	1651.08	825.54
	Fuel / Energy charges	Hour	0.50000	1030.76	515.38
4	Air compressor 8.5 cum (diesel)	Hour	13.45000	280.01	3766.13
	Fuel / Energy charges	Hour	13.45000	1506.96	20268.61
5	Waggon drill	Hour	13.20000	199.88	2638.42
	Fuel / Energy charges	Hour	13.20000	0.00	0.00
6	Jack hammer	Hour	0.50000	19.11	9.56
	Fuel / Energy charges	Hour	0.50000	0.00	0.00
Total hire charges of Machinery				Rs:	39230.18

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Tipper	Hour	5.24000	276.90	1450.96
2	Crew for Shovel	Hour	1.56000	369.20	575.95
3	Crew for Dozer	Hour	0.50000	369.20	184.60
4	Crew for Air compressor	Hour	13.45000	333.22	4481.81
5	Crew for Waggon drill	Hour	13.45000	443.04	5958.89
6	Crew for Jack hammer	Hour	0.50000	520.65	260.33
7	work inspector	Day	0.50000	775.00	387.50
8	Blaster	Day	0.50000	780.00	390.00
9	Helper blaster	Day	0.50000	640.00	320.00
10	Stone breaker	Day	1.00000	640.00	640.00
11	Stone chiseller CI- II	Day	1.00000	640.00	640.00
12	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	16480.04

labour component/unit qty 169.90
 Add contractor's profit and overhead charges 13.615% 23.10
 labour component/unit qty (including contractor's profit) 193.00

ABSTRACT:

A. Cost of Materials					Rs:	28221.69
B. Hire charges of Machinery					Rs:	39230.18
C. Cost of Labour					Rs:	16480.04
					Total	Rs: 83931.91
Add for blasting studies & monitoring vibrations etc	0.50%				Rs:	419.66
					Total	Rs: 84351.57
D. Add for contractor's profit and overheads on (A+B+C+blasting study charges)	13.615%				Rs:	11484.47
Total cost for		97.00 cum			Rs:	95836.04
Rate per cum		(A+B+C+D)/97			Rs.	988.00

IRR-CAW-2

EMBANKMENT WORKS USING BORROW AREA SOIL :

IRR-CAW-2-1

Providing impervious hearing embankment with selected soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

412.80 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer	Hour	3.40000	1651.08	5613.67
	Fuel / Energy charges	Hour	3.40000	1030.76	3504.58
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipppers 5.00 cum capacity 4 Nos.	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Pump 5 hp (diesel)	Hour	2.00000	10.34	20.68
	Fuel / Energy charges	Hour	2.00000	133.95	267.90
5	Water tanker 8000 ltr	Hour	4.00000	448.93	1795.72
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
6	Vibratory Roller 8 tonne	Hour	5.10000	1330.63	6786.21
	Fuel / Energy charges	Hour	5.10000	1741.39	8881.09
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	75587.49

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.40000	369.20	1255.28
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	32.00000	276.90	8860.80
4	Crew for Pump	Hour	2.00000	173.47	346.94
5	Crew for Water tanker	Hour	4.00000	273.98	1095.92
6	Crew for Roller	Hour	5.10000	416.52	2124.25
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	20566.79

labour component/unit qty

49.80

Add contractor's profit and overhead charges

13.615% 6.80

labour component/unit qty (including contractor's profit)

56.60**ABSTRACT:**

A. Cost of Materials					Rs:	0.00
B. Hire charges of Machinery					Rs:	75587.49
C. Cost of Labour					Rs:	20566.79
					Total	Rs: 96154.28
D. Add for contractor's profit and overheads on (A+B+C)					Rs:	13091.41
Total cost for		412.80 cum			Rs:	109245.69
Rate per cum		(A+B+C+D)/412.80			Rs.	264.65

IRR-CAW-2-2

Providing impervious hearing embankment with selected soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

412.80 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	3.40000	1651.08	5613.67
	Fuel / Energy charges	Hour	3.40000	1030.76	3504.58
2	Shovel 0.5 cum	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5 cum	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Pump 5 hp (diesel)	Hour	2.00000	10.34	20.68
	Fuel / Energy charges	Hour	2.00000	133.95	267.90
5	Water tanker 8000 ltr	Hour	4.00000	448.93	1795.72
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
6	Vibratory Roller 8 tonne	Hour	4.18000	1330.63	5562.03
	Fuel / Energy charges	Hour	4.18000	1741.39	7279.01
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	72761.23

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.40000	369.20	1255.28
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	32.00000	276.90	8860.80
4	Crew for Pump	Hour	2.00000	173.47	346.94
5	Crew for Water tanker	Hour	4.00000	273.98	1095.92
6	Crew for Roller	Hour	4.18000	416.52	1741.05
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	20183.59

labour component/unit qty

48.90

Add contractor's profit and overhead charges

13.615% 6.70

labour component/unit qty (including contractor's profit)

55.60**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 72761.23

C. Cost of Labour

Rs: 20183.59

Total Rs: 92944.82

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 12654.44

Total cost for

412.80 cum

Rs: **105599.26****Rate per cum**

(A+B+C+D)/412.80

Rs. **255.81**

IRR-CAW-2-3

Providing semi-pervious / pervious casing embankment using soil from **approved borrow area** in **layers of 25 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sortingout, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** etc., **complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

412.80 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	3.40000	1651.08	5613.67
	Fuel / Energy charges	Hour	3.40000	1030.76	3504.58
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5.00 cum capacity 3 Nos.	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Pump 5 hp (diesel)	Hour	2.00000	10.34	20.68
	Fuel / Energy charges	Hour	2.00000	133.95	267.90
5	Water tanker 8000 ltr	Hour	4.00000	448.93	1795.72
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
6	Vibratory Roller 8 tonne	Hour	5.10000	1330.63	6786.21
	Fuel / Energy charges	Hour	5.10000	1741.39	8881.09
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	75464.49

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.40000	369.20	1255.28
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	32.00000	276.90	8860.80
4	Crew for Pump	Hour	2.00000	173.47	346.94
5	Crew for Water tanker	Hour	4.00000	273.98	1095.92
6	Crew for Roller	Hour	5.10000	416.52	2124.25
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	20566.79

labour component/unit qty

49.80

Add contractor's profit and overhead charges

13.615%

labour component/unit qty (including contractor's profit)

6.80**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 75464.49

C. Cost of Labour

Rs: 20566.79

Total Rs: **96031.28**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 13074.66

Total cost for

412.80 cum

Rs: **109105.94****Rate per cum**

(A+B+C+D)/412.80

Rs: **264.31**

IRR-CAW-2-4

Providing semi-pervious / pervious casing embankment using soil from **approved borrow area** in **layers of 25cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sortingout, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

412.80 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nill		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	3.40000	1651.08	5613.67
	Fuel / Energy charges	Hour	3.40000	1030.76	3504.58
2	Shovel 0.5 cum	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5 cum	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Pump 5 hp (diesel)	Hour	2.00000	10.34	20.68
	Fuel / Energy charges	Hour	2.00000	133.95	267.90
5	Water tanker 8000 ltr	Hour	4.00000	448.93	1795.72
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
6	Vibratory Roller 8 tonne	Hour	4.17000	1330.63	5548.73
	Fuel / Energy charges	Hour	4.17000	1741.39	7261.60
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	72730.52

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.40000	369.20	1255.28
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	32.00000	276.90	8860.80
4	Crew for Pump	Hour	2.00000	173.47	346.94
5	Crew for Water tanker	Hour	4.00000	273.98	1095.92
6	Crew for Roller	Hour	5.10000	416.52	1666.08
7	work inspector	Day	4.17000	775.00	3231.75
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	21790.37

labour component/unit qty

52.80

Add contractor's profit and overhead charges

13.615%

labour component/unit qty (including contractor's profit)

60.00**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 72730.52

C. Cost of Labour

Rs: 21790.37

Total Rs: **94520.89**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 12869.02

Total cost for

412.80 cum

Rs: **107389.91****Rate per cum**

(A+B+C+D)/412.80

Rs: **260.15**

IRR-CAW-2-5 **Providing semi-pervious / pervious casing embankment** using soil from **approved borrow area** in **layers of 25cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer **without watering** to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

412.80 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	3.40000	1651.08	5613.67
	Fuel / Energy charges	Hour	3.40000	1030.76	3504.58
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5.00 cum capacity 3 Nos.	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Vibratory Roller 8 tonne	Hour	4.17000	1330.63	5548.73
	Fuel / Energy charges	Hour	4.17000	1741.39	7261.60
5	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	68497.86

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.40000	369.20	1255.28
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	32.00000	276.90	8860.80
4	Crew for Roller	Hour	4.17000	416.52	1736.89
5	work inspector	Day	2.00000	775.00	1550.00
6	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	18736.57

labour component/unit qty 45.40
 Add contractor's profit and overhead charges 13.615% 6.20
 labour component/unit qty (including contractor's profit) **51.60**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	68497.86
C. Cost of Labour	Rs:	18736.57
Total	Rs:	87234.43

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 11876.97
 Total cost for 412.80 cum Rs: **99111.40**
Rate per cum (A+B+C+D)/412.80 Rs. 240.10

IRR-CAW-2-6 **Providing hearding / casing embankment with homogeneous soil** from **approved borrow** areas in **layers of 25 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

677.28 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer	Hour	6.06000	1651.08	10005.54
	Fuel / Energy charges	Hour	6.06000	1030.76	6246.41
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5.00 cum capacity 6 Nos.	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Pump 5 hp (diesel)	Hour	3.00000	10.34	31.02
	Fuel / Energy charges	Hour	3.00000	133.95	401.85
5	Water tanker 8000 ltr	Hour	6.00000	448.93	2693.58
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
6	Vibratory Roller 8 tonne	Hour	7.53000	1330.63	10019.64
	Fuel / Energy charges	Hour	7.53000	1741.39	13112.67
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	107953.39

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	6.06000	369.20	2237.35
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Pump	Hour	3.00000	173.47	520.41
5	Crew for Water tanker	Hour	6.00000	273.98	1643.88
6	Crew for Roller	Hour	7.53000	416.52	3136.40
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	27712.84

labour component/unit qty

40.90

Add contractor's profit and overhead charges

13.615% 5.60

labour component/unit qty (including contractor's profit)

46.50**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 107953.39

C. Cost of Labour

Rs: 27712.84

Total Rs: 135666.23

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 18470.96

Total cost for

677.28 cum

Rs: **154137.19****Rate per cum**

(A+B+C+D)/677.28

Rs: **227.58**

IRR-CAW-2/7

Providing hearding / casing embankment with homogeneous soil from approved borrow

areas in **layers of 25 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **677.28 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	6.06000	1651.08	10005.54
	Fuel / Energy charges	Hour	6.06000	1030.76	6246.41
2	Shovel 0.5 cum	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5 cum 3 Nos	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Pump 5 hp (diesel)	Hour	3.00000	10.34	31.02
	Fuel / Energy charges	Hour	3.00000	133.95	401.85
5	Water tanker 8000 ltr	Hour	6.00000	448.93	2693.58
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
6	Vibratory Roller 8 tonne	Hour	6.16000	1330.63	8196.68
	Fuel / Energy charges	Hour	6.16000	1741.39	10726.96
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	103867.72

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	6.06000	369.20	2237.35
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Pump	Hour	3.00000	173.47	520.41
5	Crew for Water tanker	Hour	6.00000	273.98	1643.88
6	Crew for Roller	Hour	6.16000	416.52	2565.76
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	27142.20

labour component/unit qty

40.10

Add contractor's profit and overhead charges

13.615% 5.50

labour component/unit qty (including contractor's profit)

45.60**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 103867.72

C. Cost of Labour

Rs: 27142.20

Total Rs: 131009.92

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 17837

Total cost for

677.28 cum

Rs: **148846.92****Rate per cum**

(A+B+C+D)/677.28

Rs: **219.77**

IRR-CAW-2-8

Providing casing embankment using homogeneous soil from approved borrow area

in layers of **25 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer **without watering** to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/** 8 to 10 tonne power roller etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

677.28 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	6.06000	1651.08	10005.54
	Fuel / Energy charges	Hour	6.06000	1030.76	6246.41
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5.00 cum capacity 4 Nos.	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Vibratory Roller 8 tonne	Hour	6.16000	1330.63	8196.68
	Fuel / Energy charges	Hour	6.16000	1741.39	10726.96
5	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	97580.23

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	6.06000	369.20	2237.35
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Roller	Hour	6.16000	416.52	2565.76
5	work inspector	Day	2.00000	775.00	1550.00
6	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	24977.91

labour component/unit qty

36.90

Add contractor's profit and overhead charges

13.615% 5.00

labour component/unit qty (including contractor's profit)

41.90**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 97580.23

C. Cost of Labour

Rs: 24977.91

Total Rs: 122558.14

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 16686.29

Total cost for

677.28 cum

Rs: **139244.43****Rate per cum**

(A+B+C+D)/677.28

Rs: **205.59**

IRR-CAW-3

EMBANKMENT WORKS USING DUMP AREA SOIL :

IRR-CAW-3-1

Providing impervious hearing embankment with soil from approved dump areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to achieve density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc.,complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

735.36 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer	Hour	4.04000	1651.08	6670.36
	Fuel / Energy charges	Hour	4.04000	1030.76	4164.27
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tippers 5.00 cum capacity 6 Nos.	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Pump 5 hp (diesel)	Hour	3.00000	10.34	31.02
	Fuel / Energy charges	Hour	3.00000	133.95	401.85
5	Water tanker 8000 ltr	Hour	6.00000	448.93	2693.58
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
6	Vibratory Roller 8 tonne	Hour	7.50000	1330.63	9979.73
	Fuel / Energy charges	Hour	7.50000	1741.39	13060.43
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	102443.92

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.58000	369.20	1321.74
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Pump	Hour	3.00000	173.47	520.41
5	Crew for Water tanker	Hour	6.00000	273.98	1643.88
6	Crew for Roller	Hour	7.50000	416.52	3123.90
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	27974.73

labour component/unit qty

38.00

Add contractor's profit and overhead charges

13.615% 5.20

labour component/unit qty (including contractor's profit)

43.20**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 102443.92

C. Cost of Labour

Rs: 27974.73

Total Rs: 130418.65

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 17756.5

Total cost for

735.36 cum

Rs: **148175.15****Rate per cum**

(A+B+C+D)/735.36

Rs: **201.50**

IRR-CAW-3-2

Providing impervious hearing embankment with soil from approved dump areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to achieve density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc.,complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

735.36 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	4.04000	1651.08	6670.36
	Fuel / Energy charges	Hour	4.04000	1030.76	4164.27
2	Shovel 0.5 cum	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5 cum	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Pump 5 hp (diesel)	Hour	3.00000	10.34	31.02
	Fuel / Energy charges	Hour	3.00000	133.95	401.85
5	Water tanker 8000 ltr	Hour	6.00000	448.93	2693.58
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
6	Vibratory Roller 8 tonne	Hour	6.13000	1330.63	8156.76
	Fuel / Energy charges	Hour	6.13000	1741.39	10674.72
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	98358.24

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	4.04000	369.20	1491.57
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Pump	Hour	3.00000	173.47	520.41
5	Crew for Water tanker	Hour	6.00000	273.98	1643.88
6	Crew for Roller	Hour	6.13000	416.52	2553.27
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	27573.93

labour component/unit qty 37.50
 Add contractor's profit and overhead charges 13.615% 5.10
 labour component/unit qty (including contractor's profit) **42.60**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	98358.24
C. Cost of Labour	Rs:	27573.93
Total	Rs:	125932.17
D. Add for contractor's profit and overheads on (A+B+C)	Rs:	17145.66
Total cost for	Rs:	143077.83
Rate per cum (A+B+C+D)/735.36	Rs:	194.57

IRR-CAW-3-3

Providing semi-pervious / pervious casing embankment using soil from approved dump area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **768.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	4.22000	1651.08	6967.56
	Fuel / Energy charges	Hour	4.22000	1030.76	4349.81
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5.00 cum capacity 6 Nos	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Pump 5 hp (diesel)	Hour	3.00000	10.34	31.02
	Fuel / Energy charges	Hour	3.00000	133.95	401.85
5	Water tanker 8000 ltr	Hour	6.00000	448.93	2693.58
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
6	Vibratory Roller 8 tonne	Hour	7.82000	1330.63	10405.53
	Fuel / Energy charges	Hour	7.82000	1741.39	13617.67
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	103909.70

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	4.22000	369.20	1558.02
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Pump	Hour	3.00000	173.47	520.41
5	Crew for Water tanker	Hour	6.00000	273.98	1643.88
6	Crew for Roller	Hour	7.82000	416.52	3257.19
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	28344.30

labour component/unit qty 36.90
 Add contractor's profit and overhead charges 13.615% 5.00
 labour component/unit qty (including contractor's profit) **41.90**

ABSTRACT:

A. Cost of Materials Rs: 0.00
 B. Hire charges of Machinery Rs: 103909.70
 C. Cost of Labour Rs: 28344.30
 Total Rs: **132254.00**

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 18006.38
 Total cost for 768.00 cum Rs: **150260.38**
Rate per cum (A+B+C+D)/768 Rs: 195.65

IRR-CAW-3-4

Providing semi-pervious / pervious casing embankment using soil from **approved dump area** in **layers of 25 cm** before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **768.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	4.22000	1651.08	6967.56
	Fuel / Energy charges	Hour	4.22000	1030.76	4349.81
2	Shovel 0.5 cum	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5 cum of 6 Nos	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Pump 5 hp (diesel)	Hour	3.00000	10.34	31.02
	Fuel / Energy charges	Hour	3.00000	133.95	401.85
5	Water tanker 8000 ltr	Hour	6.00000	448.93	2693.58
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
6	Vibratory Roller 8 tonne	Hour	6.40000	1330.63	8516.03
	Fuel / Energy charges	Hour	6.40000	1741.39	11144.90
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	99670.43

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	4.22000	369.20	1558.02
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Pump	Hour	3.00000	173.47	520.41
5	Crew for Water tanker	Hour	6.00000	273.98	1643.88
6	Crew for Roller	Hour	6.40000	416.52	2665.73
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	27752.84

labour component/unit qty 36.10
 Add contractor's profit and overhead charges 13.615% 4.90
 labour component/unit qty (including contractor's profit) **41.00**

ABSTRACT:

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 99670.43

C. Cost of Labour

Rs: 27752.84

Total Rs: 127423.27

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 17348.68

Total cost for

768.00 cum

Rs: 144771.95

Rate per cum

(A+B+C+D)/768

Rs: 188.51

IRR-CAW-3-5

Providing semi-pervious / pervious casing embankment using soil from approved dump area

in **layers of 25 cm** before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer **without watering** to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **768.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	4.22000	1651.08	6967.56
	Fuel / Energy charges	Hour	4.22000	1030.76	4349.81
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tippers 5.00 cum capacity 6 Nos.	Hour	48.00000	483.37	23201.76
	Fuel / Energy charges	Hour	48.00000	506.34	24304.32
4	Vibratory Roller 8 tonne	Hour	6.40000	1330.63	8516.03
	Fuel / Energy charges	Hour	6.40000	1741.39	11144.90
5	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	93382.94

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	4.22000	369.20	1558.02
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	48.00000	276.90	13291.20
4	Crew for Roller	Hour	6.40000	416.52	2665.73
5	work inspector	Day	2.00000	775.00	1550.00
6	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	25588.55

labour component/unit qty

33.30

Add contractor's profit and overhead charges

13.615% 4.50

labour component/unit qty (including contractor's profit)

37.80**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 93382.94

C. Cost of Labour

Rs: 25588.55

Total Rs: 118971.49

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 16197.97

Total cost for

768.00 cum

Rs: 135169.46

Rate per cum

(A+B+C+D)/768

Rs: 176.00

IRR-CAW-4

EMBANKMENT WORKS USING EXCAVATED SOIL :

IRR-CAW-4-1

Providing impervious hearing embankment with soil collected in embankment area in heaps as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting out, spreading in **layer of 25 cm** before compaction, breaking clods, sectioning, **watering** and compacting each layer to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water.**

DATA:

RATE ANALYSISUNIT : **600.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	3.60000	1651.08	5943.89
	Fuel / Energy charges	Hour	3.60000	1030.76	3710.74
2	Pump 5 hp (diesel)	Hour	3.00000	10.34	31.02
	Fuel / Energy charges	Hour	3.00000	133.95	401.85
3	Water tanker 8000 ltr	Hour	5.00000	448.93	2244.65
	Fuel / Energy charges	Hour	5.00000	506.34	2531.70
4	Vibratory Roller 8 tonne	Hour	7.30000	1330.63	9713.60
	Fuel / Energy charges	Hour	7.30000	1741.39	12712.15
5	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	37371.60

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.60000	369.20	1329.12
2	Crew for Pump	Hour	3.00000	173.47	520.41
3	Crew for Water tanker	Hour	5.00000	273.98	1369.90
4	Crew for Roller	Hour	7.30000	416.52	3040.60
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	9415.03

labour component/unit qty

15.70

Add contractor's profit and overhead charges

13.615% 2.10

labour component/unit qty (including contractor's profit)

17.80**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 37371.60

C. Cost of Labour

Rs: 9415.03

Total Rs: **46786.63**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 6370

Total cost for

600.00 cum

Rs: **53156.63****Rate per cum**

(A+B+C+D)/600

Rs: **88.59**

IRR-CAW-4-2

Providing impervious hearing embankment with soil collected in embankment area in

heaps as part of disposal of excavated soil from canal including cost of all materials, machinery,

labour, all operations such as sorting out, spreading in **layer of 25 cm** before compaction,breaking clods, sectioning, **watering** and compacting each layer to density control of **not less****than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/****8 to 10 tonne power roller etc., complete with lead upto 1 km for water.**

DATA:

RATE ANALYSIS

UNIT :

600.00 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	3.60000	1651.08	5943.89
	Fuel / Energy charges	Hour	3.60000	1030.76	3710.74
2	Pump 5 hp (diesel)	Hour	3.00000	10.34	31.02
	Fuel / Energy charges	Hour	3.00000	133.95	401.85
3	Water tanker 8000 ltr	Hour	5.00000	448.93	2244.65
	Fuel / Energy charges	Hour	5.00000	506.34	2531.70
4	Vibratory Roller 8 tonne	Hour	6.06000	1330.63	8063.62
	Fuel / Energy charges	Hour	6.06000	1741.39	10552.82
5	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	33685.29

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.60000	369.20	1329.12
2	Crew for Pump	Hour	3.00000	173.47	520.41
3	Crew for Water tanker	Hour	5.00000	273.98	1369.90
4	Crew for Roller	Hour	6.06000	416.52	2524.11
5	work inspector	Day	2.00000	775.00	1550.00
6	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	9673.54

labour component/unit qty

16.10

Add contractor's profit and overhead charges

13.615% 2.20

labour component/unit qty (including contractor's profit)

18.30

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	3.60000	1651.08	5943.89
	Fuel / Energy charges	Hour	3.60000	1030.76	3710.74
2	Pump 5 hp (diesel)	Hour	3.00000	10.34	31.02
	Fuel / Energy charges	Hour	3.00000	133.95	401.85
3	Water tanker 8000 ltr	Hour	5.00000	448.93	2244.65
	Fuel / Energy charges	Hour	5.00000	506.34	2531.70
4	Vibratory Roller 8 tonne	Hour	6.06000	1330.63	8063.62
	Fuel / Energy charges	Hour	6.06000	1741.39	10552.82
5	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	33685.29

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.60000	369.20	1329.12
2	Crew for Pump	Hour	3.00000	173.47	520.41
3	Crew for Water tanker	Hour	5.00000	273.98	1369.90
4	Crew for Roller	Hour	6.06000	416.52	2524.11
5	work inspector	Day	2.00000	775.00	1550.00
6	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	9673.54

labour component/unit qty

16.10

Add contractor's profit and overhead charges

13.615% 2.20

labour component/unit qty (including contractor's profit)

18.30**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 33685.29

C. Cost of Labour

Rs: 9673.54

Total Rs: **43358.83**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 5903.3

Total cost for

600.00 cum

Rs: **49262.13****Rate per cum**

(A+B+C+D)/600

Rs: **82.10**

IRR-CAW-4-5

Providing semi-pervious / pervious casing embankment using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in **layers of 25 cm** before compaction, breaking clods, sectioning and compacting each layer **without** watering to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete.**

DATA:

RATE ANALYSIS

UNIT :

600.00 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	3.60000	1651.08	5943.89
	Fuel / Energy charges	Hour	3.60000	1030.76	3710.74
2	Vibratory Roller 8 tonne	Hour	6.06000	1330.63	8063.62
	Fuel / Energy charges	Hour	6.06000	1741.39	10552.82
3	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	28353.07

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.60000	369.20	1329.12
2	Crew for Roller	Hour	6.06000	416.52	2524.11
3	work inspector	Day	1.00000	775.00	775.00
4	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	7008.23

labour component/unit qty

11.70

Add contractor's profit and overhead charges

13.615% 1.60

labour component/unit qty (including contractor's profit)

13.30**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 28353.07

C. Cost of Labour

Rs: 7008.23

Total Rs: **35361.30**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 4814.44

Total cost for

600.00 cum

Rs: **40175.74****Rate per cum**

(A+B+C+D)/600

Rs: **66.96**

IRR-CAW-4-6

Providing compacted embankment for field irrigation channels with gravelly soil from approved borrow area including sorting out, spreading in **layers of 15 cm** thickness, breaking clods, **watering**, compacting, dressing sides to required slopes etc., complete **with lead upto 50 m and all lifts**.

DATA

RATE ANALYSISUNIT : **25.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	5 hp pump (diesel)	Hour	1.00000	10.34	10.34
	Fuel / Energy charges	Hour	1.00000	133.95	133.95
Total hire charges of Machinery				Rs:	144.29

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for pump	Hour	1.00000	173.47	173.47
2	work inspector	Day	1.00000	775.00	775.00
3	Crowbarman for loosening soil	Day	2.50000	640.00	1600.00
4	mazdoor				
	For excavation at borrow area	Day	5.00000	595.00	2975.00
	For spreading / levelling / sectioning	Day	2.50000	595.00	1487.50
	for loading soil	Day	5.00000	595.00	2975.00
5	Cartman with Bullock cart for water	Day	1.00000	670.00	670.00
6	Bullock drawn roller for rolling	Day	1.00000	670.00	670.00
Total cost of Labour				Rs:	11325.97

labour component/unit qty 453.00
 Add contractor's profit and overhead charges 13.615% 61.70
 labour component/unit qty (including contractor's profit) **514.70**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	144.29
C. Cost of Labour	Rs:	11325.97
Total	Rs:	11470.26

D. Add for contractor's profit and overheads on (A+B+C) 13.615%
 Total cost for 25.00 cum Rs: **13031.94**
Rate per cum (A+B+C+D)/25 Rs: **521.28**

IRR-CAW-5

FOUNDATION FILLING WORKS :

IRR-CAW-5-1

Providing **rubble and sand filling in layers of 22.5 to 30 cm** including cost of all materials, machinery, labour, watering, ramming etc., complete **with initial lead upto 50 m and all lifts**.

DATA

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rubble stones at quarry	cum	10.00000	395.00	3950.00
2	Sand for filling	cum	4.00000	460.00	1840.00
Total cost of Materials				Rs:	5790.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	2380.00

labour component/unit qty 238.00
 Add contractor's profit and overhead charges 13.615% 32.40
 labour component/unit qty (including contractor's profit) **270.40**

ABSTRACT:

A. Cost of Materials	Rs:	5790.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	2380.00
Total	Rs:	8170.00

D. Add for contractor's profit and overheads on (A+B+C) 13.615%
 Total cost for 10.00 cum Rs: **1112.35**
Rate per cum (A+B+C+D)/10 Rs: **928.24**

IRR-CAW-5-2 **Providing rubble and Murum filling in layers of 22.5 to 30 cm** including cost of all materials, machinery, labour, watering, ramming etc., complete with **initial lead upto 50 m and all lifts.**

DATA

RATE ANALYSIS			UNIT : 10.00 cum		
A. MATERIALS:					
Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rubble stones at quarry	cum	10.00000	395.00	3950.00
2	Murum	cum	4.00000	250.00	1000.00
Total cost of Materials				Rs:	4950.00
B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00
C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	2380.00
labour component/unit qty			238.00		
Add contractor's profit and overhead charges			13.615%	32.40	
labour component/unit qty (including contractor's profit)				270.40	
ABSTRACT:					
A. Cost of Materials				Rs:	4950.00
B. Hire charges of Machinery				Rs:	0.00
C. Cost of Labour				Rs:	2380.00
Total				Rs:	7330.00
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	997.98
Total cost for			10.00 cum	Rs:	8327.98
Rate per	cum	(A+B+C+D)/10		Rs.	832.80

IRR-CAW-5-3 **Providing and laying 25 cm thick sand blanket below embankment** including cost of all materials, machinery, labour, spreading to specified thickness etc., complete with initial lead **upto 50 m and all lifts.**

DATA

RATE ANALYSIS			UNIT : 100.00 sqm		
A. MATERIALS:					
Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Sand for Filling	cum	25.00000	460.00	11500.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	11500.00
B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00
C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	mazdoor	Day	5.00000	595.00	2975.00
Total cost of Labour				Rs:	2975.00
labour component/unit qty			29.80		
Add contractor's profit and overhead charges			13.615%	4.10	
labour component/unit qty (including contractor's profit)			33.90		
ABSTRACT:					
A. Cost of Materials				Rs:	11500.00
B. Hire charges of Machinery				Rs:	0.00
C. Cost of Labour				Rs:	2975.00
Total				Rs:	14475.00
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	1970.77
Total cost for			100.00 sqm	Rs:	16445.77
Rate per	sqm	(A+B+C+D)/100		Rs.	164.46

IRR-CAW-5-3-A **Providing and laying sand blanket below embankment** including cost of all materials, machinery, labour, spreading to specified thickness etc., complete with initial lead **upto 50 m and all lifts.**

(New Item 3-2011-12)

DATA

RATE ANALYSISUNIT : **100.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Sand for Filling	cum	100.00000	460.00	46000.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	46000.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	mazdoor	Day	20.00000	595.00	11900.00
Total cost of Labour				Rs:	11900.00

labour component/unit qty 119.00
 Add contractor's profit and overhead charges 13.615% 16.20
 labour component/unit qty (including contractor's profit) **135.20**

ABSTRACT:

A. Cost of Materials	Rs:	46000.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	11900.00
Total	Rs:	57900.00

D. Add for contractor's profit and overheads on (A+B+C) 13.615%
 Total cost for 100.00 cum Rs: **7883.09**
Rate per cum (A+B+C+D)/100 Rs: 657.83

IRR-CAW-5-4

Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto **50 m and all lifts.**

DATA

RATE ANALYSISUNIT : **100.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rubble	cum	100.00000	395.00	39500.00
2	Stone chips	cum	15.00000	466.00	6990.00
3	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	46572.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class-II	Day	7.00000	640.00	4480.00
3	mazdoor	Day	19.00000	595.00	11305.00
Total cost of Labour				Rs:	16560.00

labour component/unit qty 165.60
 Add contractor's profit and overhead charges 13.615% 22.50
 labour component/unit qty (including contractor's profit) **188.10**

ABSTRACT:

A. Cost of Materials	Rs:	46572.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	16560.00
Total	Rs:	63132.00

D. Add for contractor's profit and overheads on (A+B+C) 13.615%
 Total cost for 100.00 cum Rs: **8595.42**
Rate per cum (A+B+C+D)/100 Rs: 717.27

IRR-CAW-5-5

Providing and constructing longitudinal and cross graded filter drains using sand and 20 mm down graded aggregates satisfying specified filter criteria in layers as per specifications including cost of all materials, machinery, labour, laying to required slopes, compaction etc., **complete with initial lead upto 50 m and all lifts.**

DATA

RATE ANALYSIS					
A. MATERIALS:			UNIT : 100.00 cum		
Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Sand (Un-Screened)	cum	76.80000	605.00	46464.00
2	Coarse aggregate 20-10 mm 75 %	cum	17.40000	1508.00	26239.20
3	Coarse aggregate 10 mm down 25 %	cum	5.80000	1098.00	6368.40
Total cost of Materials				Rs:	79071.60
B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00
C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	36.00000	595.00	21420.00
Total cost of Labour				Rs:	22195.00
labour component/unit qty			222.00		
Add contractor's profit and overhead charges			13.615% 30.20		
labour component/unit qty (including contractor's profit)			252.20		
ABSTRACT:					
A. Cost of Materials				Rs:	79071.60
B. Hire charges of Machinery				Rs:	0.00
C. Cost of Labour				Rs:	22195.00
				Total Rs:	101266.60
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	13787.45
Total cost for			100.00 cum	Rs:	115054.05
Rate per	cum	(A+B+C+D)/100		Rs.	1150.54

IRR-CAW-5-6

Laying Longitudinal Drains and Transverse drains of Size 600 x600 x750 mm in Bed and
 filling with 12 mm to 40 mm HG machine Crushed metal and sand in bed including
 Excavation of drains and Cost of procuring of all materials **including 50 m lead and for all lifts.**

DATA:

RATE ANALYSIS					
A. MATERIALS:			Unit: 100 mt		
Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	12 mm to 40 mm metal	Cum	13.50000	1441.00	19453.50
2	Sand (Un-Screened)	cum	36.00000	605.00	21780.00
Total cost of Materials				Rs.	41233.50
B. MACHINERY					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Excavation of drain with Excavator	Cum	45.00000	47.00	2115.00
Total hire charges of Machinery				Rs.	2115.00
C. LABOUR					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Labour for Sand laying	Cum	5.14000	595.00	3058.30
2	Labour for Metal laying	Cum	1.93000	595.00	1148.35
Total cost of Labour				Rs.	4206.65
labour component/unit qty			42.10		
Add contractor's profit and overhead charges			13.615% 5.70		
labour component/unit qty (including contractor's profit)			47.80		
ABSTRACT					
A. Cost of Materials				Rs.	41233.5
B. Hire charges of Machinery				Rs.	2115
C. Cost of Labour				Rs.	4206.65
				Total Rs:	47555.15
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	6474.63
Total cost for			100.00 mt	Rs:	54029.78
Rate per	mt	(A+B+C+D)/100		Rs.	540.30

IRR-CAW-5-7

Laying and fixing of 100 mm Dia 300 mm long precast porous CC plugs in bed and sides
 using 0.787 Kgs of cement per each using 20 mm HG metal and placing in local filters of size
 600x600x750 mm in size including Excavation of drains and Cost of procuring of all materials
including 50 m lead and for all lifts. (Thickness of lining = 100 mm)

DATA

Rate Analysis

Unit

1 Plug

A. MATERIALS:

Sl.No	Particulars	Unit	Qty	Rate in Rs	Amount in Rs.
1	Coarse aggregate	Cum	0.12200	1508.00	183.98
2	Sand (Un-Screened)	cum	0.18782	605.00	113.63
3	Cement	Kg	0.78700	4.22	3.32
Total cost of materials				Rs.	300.93

B. MACHINERY

Sl.No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Excavation of drain with Excavator	Cum	0.27000	47.00	12.69
2	Machine mixing Charges	Cum	0.00200	535.75	1.07
Total hire charges of Machinery				Rs.	13.76

C. LABOUR

Sl.No	Particulars	Unit	Qty	Rate in Rs	Amount in Rs.
1	Mazdoor	Day	0.30000	595.00	178.50
Total cost of Labour				Rs.	178.50

labour component/unit qty 178.50
 Add contractor's profit and overhead charges 13.615% 24.30
 labour component/unit qty (including contractor's profit) **202.80**

ABSTRACT

A. Cost of Materials	Rs.	300.93
B. Hire charges of Machinery	Rs.	13.76
C. Cost of Labour	Rs.	178.50
	Total	Rs. 493.19
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs. 67.15
Total cost for		Rs. 560.34
Rate per each plug	(A+B+C+D)/1.0	Rs. 560.34

IRR-CAW-5-8

Providing and constructing 0.50 m thick vertical or inclined graded filter media consisting of 15 cm thick sand layers and 20 cm thick 20 mm down coarse aggregate layer using approved materials satisfying specified filter criteria as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., complete with initial lead upto **50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

100.00 cum

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Sand (Un-Screened)	cum	60.00000	605.00	36300.00
2	Coarse aggregate 20-10 mm 75 %	cum	30.00000	1508.00	45240.00
3	Coarse aggregate 10 mm down 25 %	cum	10.00000	1098.00	10980.00
Total cost of Materials				Rs.	92520.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs.	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	36.00000	595.00	21420.00
Total cost of Labour				Rs.	22195.00

labour component/unit qty 222.00
 Add contractor's profit and overhead charges 13.615% 30.20
 labour component/unit qty (including contractor's profit) **252.20**

ABSTRACT:

A. Cost of Materials	Rs.	92520.00
B. Hire charges of Machinery	Rs.	0.00
C. Cost of Labour	Rs.	22195.00
	Total	Rs. 114715.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs. 15618.45
Total cost for		Rs. 130333.45
Rate per cum	(A+B+C+D)/100.0	Rs. 1303.33

IRR-CAW-5-9

Providing and constructing graded filter media below and behind rock-toe consisting of 20 cm thick sand, 15 cm thick 20 mm down and 15 cm thick 40 mm down size graded coarse aggregates satisfying filter criteria behind rock-toe and 15 cm thick sand, 20 cm thick 20 mm down coarse aggregate and 65 cm thick 40 mm down size coarse aggregate satisfying filter criteria below rock-toe as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **176.00 cum****A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Sand (Un-Screened)	cum	58.77000	605.00	35555.85
2	Coarse aggregate 40-20 mm	cum	52.70000	1441.00	75940.70
3	Coarse aggregate 20-10 mm	cum	50.70000	1508.00	76455.60
4	Coarse aggregate 10 mm down	cum	13.80000	1098.00	15152.40
Total cost of Materials				Rs:	203104.55

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoors	Day	60.00000	595.00	35700.00
Total cost of Labour				Rs:	36475.00

labour component/unit qty 207.20

Add contractor's profit and overhead charges 13.615% 28.20

labour component/unit qty (including contractor's profit) **235.40****ABSTRACT:**

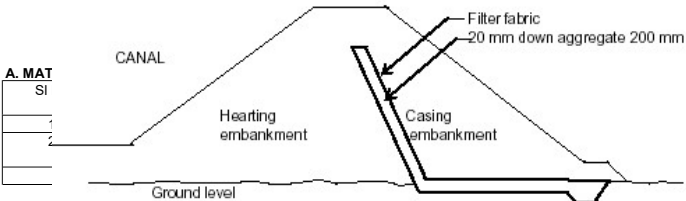
A. Cost of Materials	Rs:	203104.55
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	36475.00
Total	Rs:	239579.55

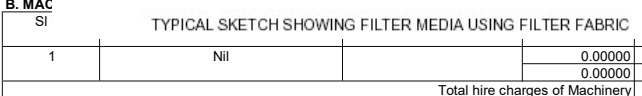
D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 32618.76

Total cost for 176.00 cum Rs: **272198.31****Rate per cum (A+B+C+D)/176.0 Rs: 1546.58**

- IRR-CAW-5-10 **Providing and laying filter media consisting of 2 layers of poly-propeline nonwoven filter fabric and 200 mm thick 20 mm down graded coarse aggregate for embankment including cost of all materials, machinery, labour, forming toe drain etc., complete with lead upto 50 m**
- (a) **a. for aggregate and all leads for fabric and all lifts.**
- Using 200 gsm filter fabric.**

DATA:

A. MAT SI 				100.00 sqm	
				te	Amount
				ts.	in Rs.
				120.00	25200.00
		1508.00		22620.00	
		1098.00		5490.00	
		Rs:		53310.00	

B. MAC SI 				100.00 sqm	
				te	Amount
				ts.	in Rs.
				120.00	25200.00
		1508.00		22620.00	
		1098.00		5490.00	
		Rs:		53310.00	

C. LABOUR: SI No 		Description 		Unit 		Quantity 		Rate in Rs. 		Amount in Rs.	
										100.00 sqm	
										te	Amount
										ts.	in Rs.
1	work inspector	Day	1.00000	775.00	775.00						
2	mazdoor	Day	7.00000	595.00	4165.00						
		Total cost of Labour		Rs:	4940.00						

labour component/unit qty		49.40
Add contractor's profit and overhead charges		13.615%
labour component/unit qty (including contractor's profit)		56.10

ABSTRACT:

A. Cost of Materials				Rs:	53310.00
B. Hire charges of Machinery				Rs:	0.00
C. Cost of Labour				Rs:	4940.00
				Total	Rs: 58250.00
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	7930.74
Total cost for		100.00 sqm		Rs:	66180.74
Rate per	sqm	(A+B+C+D)/100.0		Rs:	661.81

- IRR-CAW-5-11 (b) **Providing and laying filter media consisting of 2 layers of poly-propylene nonwoven filter fabric and 200 mm thick 20 mm down graded coarse aggregate for embankment including cost of all materials, machinery, labour, forming toe drain etc., complete with lead upto 50 m for aggregate and all leads for fabric and all lifts.**
- b. **Using 250 gsm filter fabric.**

Data

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	PP filter fabric 250 gsm	sqm	210.00000	135.00	28350.00
2	20 - 10 mm CA @ 75 %	cum	15.00000	1508.00	22620.00
	10 mm down CA @ 25 %	cum	5.00000	1098.00	5490.00
Total cost of Materials				Rs:	56460.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	7.00000	595.00	4165.00
Total cost of Labour				Rs:	4940.00

labour component/unit qty

49.40

Add contractor's profit and overhead charges

13.615%

6.70

labour component/unit qty (including contractor's profit)

56.10**ABSTRACT:**

A. Cost of Materials				Rs:	56460.00
B. Hire charges of Machinery				Rs:	0.00
C. Cost of Labour				Rs:	4940.00
				Total	Rs: 61400.00
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	8359.61
Total cost for		100.00 sqm		Rs:	69759.61
Rate per	sqm	(A+B+C+D)/100.0		Rs:	697.60

IRR-CAW-6

ROCK FILL WORKS :

IRR-CAW-6-1

Providing and **constructing rockfill casing to canal embankment** with graded stones and spalls from **approved quarry** including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing surface to required slopes etc., **complete with initial lead upto 50 m and all lifts.**

DATA

RATE ANALYSISUNIT : **100.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rubble stones (at quarry)	cum	100.00000	395.00	39500.00
2	Stone chips / spalls (at quarry)		15.00000	466.00	6990.00
Total cost of Materials				Rs:	46490.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	6.00000	640.00	3840.00
2	mazdoor	Day	8.00000	595.00	4760.00
Total cost of Labour				Rs:	8600.00

labour component/unit qty

86.00

Add contractor's profit and overhead charges

13.615%

11.70

labour component/unit qty (including contractor's profit)

97.70

ABSTRACT:

A. Cost of Materials				Rs:	46490.00
B. Hire charges of Machinery				Rs:	0.00
C. Cost of Labour				Rs:	8600.00
				Total	Rs: 55090.00
D. Add for contractor's profit and overheads on (A+B+C)		13.615%		Rs:	7500.5
Total cost for	100.00 cum			Rs:	62590.50
Rate per cum		(A+B+C+D)/100.0		Rs.	625.91

IRR-CAW-6-2 Providing and **constructing rockfill casing to canal embankment** with graded stones and spalls **available in dump yard (spoil bank)** including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing surface to required slopes etc., **complete with initial lead upto 50 m and all lifts.**

DATA

RATE ANALYSISUNIT : **100.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rubble stones at dump yard	cum	100.00000	204.00	20400.00
2	Stone chips (spalls) at dump yard		15.00000	236.00	3540.00
Total cost of Materials				Rs:	23940.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	6.00000	640.00	3840.00
2	Crowbarman	Day	2.00000	640.00	1280.00
3	mazdoor	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs:	11070.00

labour component/unit qty	110.70
Add contractor's profit and overhead charges	13.615% 15.10
labour component/unit qty (including contractor's profit)	125.80

ABSTRACT:

A. Cost of Materials				Rs:	23940.00
B. Hire charges of Machinery				Rs:	0.00
C. Cost of Labour				Rs:	11070.00
				Total	Rs: 35010.00
D. Add for contractor's profit and overheads on (A+B+C)		13.615%		Rs:	4766.61
Total cost for	100.00 cum			Rs:	39776.61
Rate per cum		(A+B+C+D)/100.0		Rs.	397.77

IRR-CAW-7

CANAL LINING WORKS :

IRR-CAW-7-1

Providing cohesive non-swelling (CNS) soil lining to canals using soil from **approved borrow area** including spreading soil in **layers of thickness not more than 15 cm**, breaking clods, watering, compacting to density control of **not less than 98 percent** or as stipulated, dressing to required profile etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **394.00 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shovel 0.5 cum	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
2	Angle dozer 90 hp	Hour	3.00000	1651.08	4953.24
	Fuel / Energy charges	Hour	3.00000	1030.76	3092.28
3	Tipper 5 cum	Hour	24.00000	483.37	11600.88
	Fuel / Energy charges	Hour	24.00000	506.34	12152.16
4	Pump 5 hp (diesel)	Hour	4.00000	10.34	41.36
	Fuel / Energy charges	Hour	4.00000	133.95	535.80
5	Water tanker 8000 ltr	Hour	4.00000	448.93	1795.72
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
6	Diesel road roller 8-10 tonne	Hour	11.50000	192.67	2215.71
	Fuel / Energy charges	Hour	11.50000	1205.58	13864.17
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	67298.24

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	Crew for Dozer	Hour	3.00000	369.20	1107.60
3	Crew for Tipper	Hour	24.00000	276.90	6645.60
4	Crew for Pump	Hour	4.00000	173.47	693.88
5	Crew for Water tanker	Hour	4.00000	273.98	1095.92
6	Crew for Road roller	Hour	11.50000	339.46	3903.79
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	38.00000	595.00	22610.00
Total cost of Labour				Rs:	40560.39
labour component/unit qty			102.90		
Add contractor's profit and overhead charges			13.615%	14.00	
labour component/unit qty (including contractor's profit)				116.90	

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	67298.24
C. Cost of Labour	Rs:	40560.39
Total	Rs:	107858.63
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 14684.95
Total cost for	394.00 cum	Rs: 122543.58
Rate per cum	(A+B+C+D)/394.0	Rs: 311.02

IRR-CAW-7-2

Providing cohesive non-swelling (CNS) soil lining to canals using soil from approved borrow area including spreading soil in layers of thickness **not more than 15 cm**, breaking clods, watering, compacting to density control of **not less than 95 percent** or as stipulated, dressing to required profile etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

394.00 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shovel 0.5 cum	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
2	Angle dozer 90 hp	Hour	3.00000	1651.08	4953.24
	Fuel / Energy charges	Hour	3.00000	1030.76	3092.28
3	Tipplers 5 cum	Hour	24.00000	483.37	11600.88
	Fuel / Energy charges	Hour	24.00000	506.34	12152.16
4	Pump 5 hp (diesel)	Hour	4.00000	10.34	41.36
	Fuel / Energy charges	Hour	4.00000	133.95	535.80
5	Water tanker 8000 ltr	Hour	4.00000	448.93	1795.72
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
6	Diesel road roller 8-10 tonnes	Hour	10.00000	192.67	1926.70
	Fuel / Energy charges	Hour	10.00000	1205.58	12055.80
7	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	65200.86

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Shovel	Hour	8.00000	369.20	2953.60
2	Crew for Dozer	Hour	3.00000	369.20	1107.60
3	Crew for Tipper	Hour	24.00000	276.90	6645.60
4	Crew for Pump	Hour	4.00000	173.47	693.88
5	Crew for Water tanker	Hour	4.00000	273.98	1095.92
6	Crew for Road roller	Hour	10.00000	339.46	3394.60
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	38.00000	595.00	22610.00
Total cost of Labour				Rs:	40051.20
labour component/unit qty			101.70		
Add contractor's profit and overhead charges			13.615%	13.80	
labour component/unit qty (including contractor's profit)				115.50	

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Stone chiseller Cl- I	Day	2.00000	700.00	1400.00
3	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	3365.00

labour component/unit qty

105.20

Add contractor's profit and overhead charges

13.615% 14.30

labour component/unit qty (including contractor's profit)

119.50**ABSTRACT:**

A. Cost of Materials

Rs: 992.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 3365.00

Total Rs: **4357.00**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 593.21

Total cost for

32.00 Nos.

Rs: **4950.21****Rate per each**

(A+B+C+D)/32.0

Rs. **154.69**

IRR-CAW-7-5

Providing, fabricating and **placing in position reinforcement steel bars for RCC works**

including cleaning, straightening, cutting, bending, hooking, lapping, tying with 1.25 mm dia.

soft annealed steel wire, welding wherever required including cost of all materials, machinery,

labour etc., complete **with initial lead upto 50 and all lifts.**

DATA

RATE ANALYSIS

UNIT :

1000.00 kg**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rein.Steel with 5 % wastage	kg	1050.00000	59.00	61950.00
2	Binding wire 1.25 mm dia	kg	8.00000	64.00	512.00
3	Sundries (chairs / spacers etc)	LS	10.00000	41.00	410.00
Total cost of Materials				Rs:	62872.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Bar bender	Day	6.00000	850.00	5100.00
2	mazdoor	Day	11.00000	595.00	6545.00
Total cost of Labour				Rs:	11645.00

labour component/unit qty

11.60

Add contractor's profit and overhead charges

13.615% 1.60

labour component/unit qty (including contractor's profit)

13.20**ABSTRACT:**

A. Cost of Materials

Rs: 62872.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 11645.00

Total Rs: **74517.00**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 10145.49

Total cost for

1000.00 kg

Rs: **84662.49****Rate per kg**

(A+B+C+D)/1000.0

Rs. **84.66**

IRR-CAW-7-6

Providing and **laying 75 mm thick in-situ M-15** (28 days cube compressive strength not lessthan 15 N / sqmm) grade cement concrete with **20 mm down size** approved, clean, hard,graded aggregates **for canal lining using vibrating cylinder type mechanical paver** including

cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position,

finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver

from one side to other side of canal etc., complete **with initial lead upto 1 km and all lifts.****(43 Gr Cement content: 300 kg /cum (22.5 kg/ sqm) for****use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35,****FA : 0.45 cum equivalent concrete volume:79.2 cum including the extra quantity of****concrete for curvatures and bends etc..)**

DATA:

RATE ANALYSIS

UNIT :

960 sqm**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement 43 Gr	kg	23760.00000	4.22	100267.20
2	Coarse aggregate 20-10 mm	cum	41.18400	1508.00	62105.47
	Coarse aggregate 10-4.75 mm	cum	22.17600	1098.00	24349.25
3	Fine aggregate (Un-Screened)	cum	35.64000	605.00	21562.20
4	Super plasticiser	kg	95.04000	63.00	5987.52
5	PVC sealing strip	Rm	640.00000	44.00	28160.00
6	Use rate of paving cylinder	sqm	960.00000	1.08	1036.80
7	Sundries	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	243673.44

B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Batching plant	Hour	8.00000	396.19	3169.52
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
2	Transit mixer 3 Nos	Hour	24.00000	794.00	19056.00
	Fuel / Energy charges	Hour	24.00000	1473.48	35363.52
3	Mechanical paver	Hour	8.00000	351.40	2811.20
	Lubricants etc @ 5 %	Hour	8.00000	17.57	140.56
4	DG set for batching plant 50 KVA	Hour	8.00000	84.89	679.12
	Fuel / Energy charges	Hour	8.00000	1807.43	12859.44
5	DG set for paver 30 KVA	Hour	8.00000	67.95	543.60
	Fuel / Energy charges	Hour	8.00000	1071.63	8573.04
6	Shovel 0.5 cum / Loader	Hour	2.00000	1048.36	2096.72
	Fuel / Energy charges	Hour	2.00000	803.71	1607.42
7	Water tanker	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
8	Pump 5 hp(diesel) 2 Nos. 4 hrs each	Hour	8.00000	10.34	82.72
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
9	Sundries (power line etc)	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	98947.14

C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Transit mixer	Hour	24.00000	443.04	10632.96
3	Crew for Concrete paver	Hour	8.00000	666.43	5331.44
4	Crew for DG set	Hour	16.00000	208.26	3332.16
5	Crew for Shovel	Hour	2.00000	369.20	738.40
6	Crew for Water tanker	Hour	8.00000	273.98	2191.84
7	Crew for Pump	Hour	16.00000	173.47	2775.52
8	Mason Class I	Day	2.00000	710.00	1420.00
9	Mechanic	Day	1.00000	720.00	720.00
10	Fitter	Day	1.00000	720.00	720.00
11	Electrician	Day	1.00000	790.00	790.00
12	work inspector	Day	2.00000	775.00	1550.00
13	mazdoor (BP site)	Day	5.00000	595.00	2975.00
14	mazdoor (Paver site)	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs:	43409.56

labour component/unit qty 45.20
Add contractor's profit and overhead charges 13.615% 6.20
labour component/unit qty (including contractor's profit) **51.40**

ABSTRACT:

A. Cost of Materials		Rs:	243673.44
B. Hire charges of Machinery		Rs:	98947.14
C. Cost of Labour		Rs:	43409.56
		Total Rs:	386030.14
Add for shifting & re-erection of BP @	2%	Rs:	7720.6
Add for LH / RH shifting & erection of Paver @	0.5%	Rs:	1930.15
Add for ledge cutting / erection of tracks etc @	1%	Rs:	3860.3
		Total Rs:	399541.19
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs:	54397.53
Lead Charges for 1 Km for FA	35.64 cum @	43.1737 Rs./Cum	1538.71
Lead Charges for 1 Km for CA	63.36 cum @	41.514921 Rs./Cum	2630.39
Total cost for	960.00 sqm	Rs:	458107.82
Rate per sqm	(A+B+C+D)/960.0	Rs:	477.20

IRR-CAW-7-7 Providing and **laying 80 mm thick in-situ M-15** (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete with **20 mm down size** approved, clean, hard, graded aggregates for **canal lining using vibrating cylinder type mechanical paver** including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete **with initial lead upto 1 km and all lifts.**
(43 Gr Cement content: 300 kg /cum (24 kg/ sqm) for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum equivalent concrete volume:84.48 cum including the extra quantity of concrete for curvatures and bends etc..)

DATA:

RATE ANALYSIS			UNIT :		960 sqm
A. MATERIALS:					
SI No	particulars	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Cement 43 Gr	kg	25344.00000	4.22	106951.68
2	Coarse aggregate 20-10 mm	cum	43.92960	1508.00	66245.84
	Coarse aggregate 10-4.75 mm	cum	23.65440	1098.00	25972.53
3	Fine aggregate (Un-Screened)	cum	38.01600	605.00	22999.68
4	Super plasticiser	kg	101.37600	63.00	6386.69
5	PVC sealing strip	Rm	640.00000	44.00	28160.00
6	Use rate of paving cylinder	sqm	960.00000	1.08	1036.80
7	Sundries	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	257958.22
B. MACHINERY:					
SI No	Description	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Batching plant	Hour	8.00000	396.19	3169.52
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
2	Transit mixer 3 Nos	Hour	24.00000	794.00	19056.00
	Fuel / Energy charges	Hour	24.00000	1473.48	35363.52
3	Mechanical paver	Hour	8.00000	351.40	2811.20
	Lubricants etc @ 5 %	Hour	8.00000	17.57	140.56
4	DG set for batching plant 50 KVA	Hour	8.00000	84.89	679.12
	Fuel / Energy charges	Hour	8.00000	1607.43	12859.44
5	DG set for paver 30 KVA	Hour	8.00000	67.95	543.60
	Fuel / Energy charges	Hour	8.00000	1071.63	8573.04
6	Shovel 0.5 cum / Loader	Hour	2.00000	1048.36	2096.72
	Fuel / Energy charges	Hour	2.00000	803.71	1607.42
7	Water tanker	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
8	Pump 5 hp(diesel) 2 Nos. 4 hrs each	Hour	8.00000	10.34	82.72
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
9	Sundries (power line etc)	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	98947.14
C. LABOUR:					
SI No	Description	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Transit mixer	Hour	24.00000	443.04	10632.96
3	Crew for Concrete paver	Hour	8.00000	666.43	5331.44
4	Crew for DG set	Hour	16.00000	208.26	3332.16
5	Crew for Shovel	Hour	2.00000	369.20	738.40
6	Crew for Water tanker	Hour	8.00000	273.98	2191.84
7	Crew for Pump	Hour	16.00000	173.47	2775.52
8	Mason Class I	Day	2.00000	710.00	1420.00
9	Mechanic	Day	1.00000	720.00	720.00
10	Fitter	Day	1.00000	720.00	720.00
11	Electrician	Day	1.00000	790.00	790.00
12	work inspector	Day	2.00000	775.00	1550.00
13	mazdoor (BP site)	Day	5.00000	595.00	2975.00
14	mazdoor (Paver site)	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs:	43409.56
labour component/unit qty			45.20		
Add contractor's profit and overhead charges			13.615%	6.20	
labour component/unit qty (including contractor's profit)			51.40		
ABSTRACT:					
A. Cost of Materials			Rs:	257958.22	
B. Hire charges of Machinery			Rs:	98947.14	
C. Cost of Labour			Rs:	43409.56	
			Total	Rs:	400314.92
Add for shifting & re-erection of BP @			2%	Rs:	8006.3
Add for LH / RH shifting & erection of Paver @			0.5%	Rs:	2001.57
Add for ledge cutting / erection of tracks etc @			1%	Rs:	4003.15
				Total	Rs: 414325.94
D. Add for contractor's profit and overheads on (A+B+C+other percentages)			13.615%	Rs:	56410.48
Lead Charges for 1 Km for FA			38.02 cum @	43.1737 Rs./Cum	1641.29
Lead Charges for 1 Km for CA			67.58 cum @	41.514921 Rs./Cum	2805.74
Total cost for			960.00 sqm	Rs:	475183.45
Rate per sqm			(A+B+C+D)/960.0	Rs.	494.98

IRR-CAW-7-8

Providing and laying 100 mm thick in situ M-15 (28 days cube compressive strength not less than 15 N /Sqmm) grade cement concrete with 20 mm down size approved, clean, hard, graded aggregates for canal lining using, vibrating, cylinder type mechanical paver including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete with initial lead upto 1 Km and all lifts.

(43 Gr Cement content: 300 kg /cum (30 kg/ sqm) for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum equivalent concrete volume:88 cum including the extra quantity of concrete for curvatures and bends etc..)

DATA:

RATE ANALYSIS			UNIT	:	800 Sqm
A. MATERIALS:					
Sl.No	Particulars	Unit	Qty	Rate in Rs.	Amount
1	Cement 43 Gr	Kg	26400.00000	4.22	111408.00
2	Coarse aggregate 20-10 mm	cum	45.76000	1508.00	69006.08
	Coarse aggregate 10-4.75 mm	cum	24.64000	1098.00	27054.72
3	Fine aggregate (Un-Screened)	cum	39.60000	605.00	23958.00
4	Super plasticiser	kg	105.60000	63.00	6652.80
5	PVC sealing strip	Rm	533.00000	44.00	23452.00
6	Use rate of paving cylinder	sqm	800.00000	1.08	864.00
Total cost of Materials Rs.					262395.60

B. MACHINERY:					
Sl.No	Particulars	Unit	Qty	Rate in Rs.	Amount
1	Batching plant	Hour	8.00000	396.19	3169.52
	Fuel / Energy charges	Hour	8.00000	380.69	3045.52
2	Transit mixer 3 Nos	Hour	24.00000	794.00	19056.00
	Fuel / Energy charges	Hour	24.00000	1473.48	35363.52
3	Mechanical paver	Hour	8.00000	351.40	2811.20
	lubricants etc @ 5%	Hour	8.00000	17.57	140.56
4	DG set for batching plant 50 KVA	Hour	8.00000	84.89	679.12
	Fuel / Energy charges	Hour	8.00000	1607.43	12859.44
5	DG set for paver 30 KVA	Hour	8.00000	67.95	543.60
	Fuel / Energy charges	Hour	8.00000	1071.63	8573.04
6	Shovel 0.5 cum / Loader	Hour	2.00000	1048.36	2096.72
	Fuel / Energy charges	Hour	2.00000	803.71	1607.42
7	Water tanker	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
8	Pump 5 hp (diesel) 2 Nos. 4 hrs each	Hour	8.00000	10.34	82.72
	Fuel / Energy charges		8.00000	133.95	1071.60
Total hire charges of Machinery Rs.					98742.14

C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Transit mixer	Hour	24.00000	443.04	10632.96
3	Crew for Concrete paver	Hour	8.00000	666.43	5331.44
4	Crew for DG set	Hour	16.00000	208.26	3332.16
5	Crew for Shovel	Hour	2.00000	369.20	738.40
6	Crew for Water tanker	Hour	8.00000	273.98	2191.84
7	Crew for Pump	Hour	8.00000	173.47	1387.76
8	Mason Class I	Day	2.00000	710.00	1420.00
9	Mechanic	Day	1.00000	720.00	720.00
10	Fitter	Day	1.00000	720.00	720.00
11	Electrician	Day	1.00000	790.00	790.00
12	work inspector	Day	2.00000	775.00	1550.00
13	mazdoor (BP site)	Day	5.00000	595.00	2975.00
14	mazdoor (Paver site)	Day	10.00000	595.00	5950.00
Total cost of Labour Rs:					42021.80

labour component/unit qty 52.50
 Add contractor's profit and overhead charges 13.615% 7.10
 labour component/unit qty (including contractor's profit) **59.60**

ABSTRACT

A. Cost of Materials	Rs.	262395.6
B. Hire charges of Machinery	Rs.	98742.14
C. Cost of Labour	Rs.	42021.80
	TOTAL Rs.	403159.54
Add for shifting & re-erection of BP @	2% Rs.	8063.19
Add for LH / RH shifting & erection of Paver @	0.5% Rs.	2015.8
Add for ledge cutting / erection of tracks etc @	1% Rs.	4031.6
	Total Rs:	417270.13
D. Add for contractor's profit and overheads on (A+B+C+other percentages)	13.615%	Rs: 56811.33
Lead Charges for 1 Km for FA	39.60 cum @	43.1737 Rs./Cum 1709.68
Lead Charges for 1 Km for CA	70.40 cum @	41.514921 Rs./Cum 2922.65

Total cost for 800.00 Sqm Rs: **478713.79**
Rate per Sqm (A+B+C+D)/800.0 Rs. **598.39**

IRR-CAW-7-9

Dismantling, shifting and re-erecting mechanical concrete paver and DG set with all accessories across canal CD work or other locations wherever shifting and re-erecting is necessary including aligning paver correctly for continuing canal lining work, cost of all materials, machinery, labour etc., complete with all leads and lifts.

DATA:

RATE ANALYSIS			UNIT	:	1.00 Shifting
A. MATERIALS:					
Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total cost of Materials Rs:					0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tipper	Hour	4.00000	483.37	1933.48
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
2	Sundries (ropes / rails etc)	LS	1.00000	41.00	41.00
Total hire charges of Machinery				Rs:	2480.82

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Tipper	Hour	4.00000	276.90	1107.60
2	Crew for Paver	Hour	8.00000	666.43	5331.44
3	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	10009.04

labour component/unit qty

10009.00

Add contractor's profit and overhead charges

13.615% 1362.70

labour component/unit qty (including contractor's profit)

11371.70**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 2480.82

C. Cost of Labour

Rs: 10009.04

Total Rs: **12489.86**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1700.49

Total cost for

1.00 Shifting

Rs: **14190.35****Rate per Shifting**

(A+B+C+D)/1.0

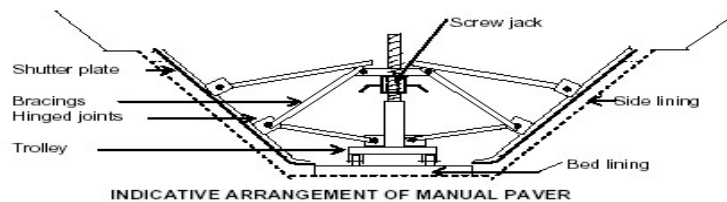
Rs. **14190.35**

IRR-CAW-7-10 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N /sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal(150mm thick)** including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts. (Cement content : 250 kg / cum)**
(43 Gr Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement), CA : 0.90cum, Blending Ratio of CA-50:30:20, FA : 0.40 cum)

DATA

RATE ANALYSIS

UNIT :

28.17 cum**INDICATIVE ARRANGEMENT OF MANUAL PAVER**

	Amount in Rs.
4.22	29719.35
4.22	594.39
41.00	18266.84
08.00	11469.70
98.00	5567.52
05.00	6817.14
63.00	1774.71
64.94	11689.20
41.00	82.00
Rs:	85980.85

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 600/400 ltr (diesel)	Hour	16.00000	93.08	1489.28
	Fuel / Energy charges	Hour	16.00000	267.90	4286.40
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	16.00000	8.39	134.24
	Fuel / Energy charges	Hour	16.00000	30.14	482.24
Total hire charges of Machinery				Rs:	7419.58

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	16.00000	347.10	5553.60
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Needle vibrator	Hour	16.00000	249.86	3997.76
5	work inspector	Day	1.00000	775.00	775.00
6	Mason Class-I	Day	2.00000	710.00	1420.00
7	Fitter	Day	1.00000	720.00	720.00
8	mazdoor				
	for batching materials	Day	22.00000	595.00	13090.00
	for loading mortar pans	Day	8.00000	595.00	4760.00
	for laying and moving paver	Day	6.00000	595.00	3570.00
	for conveying concrete	Day	28.17000	595.00	16761.15
	for cleaning/ washing/ curing	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	52198.23

labour component/unit qty 1853.00
 Add contractor's profit and overhead charges 13.615% 252.30
 labour component/unit qty (including contractor's profit) **2105.30**

ABSTRACT:

A. Cost of Materials	Rs:	85980.85
B. Hire charges of Machinery	Rs:	7419.58
C. Cost of Labour	Rs:	52198.23
Total	Rs:	145598.66

D. Add for contractor's profit and overheads on (A+B+C) 13.615%
 Total cost for 28.17 cum
Rate per cum (A+B+C+D)/28.17 Rs. 5872.27

IRR-CAW-7-11 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N/sqmm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregate **for bed and side lining of canal(100 mm thick)** including, finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead up to 50 m and all lifts (Cement content: 250 kg/cum)** (43 Gr Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement), CA : 0.90cum, Blending Ratio of CA-50:30:20, FA : 0.40 cum)

DATA

RATE ANALYSIS

UNIT:

27 cum**A. MATERIALS:**

Sl.No	Particulars	Unit	Qty	Rate in Rs.	Amount
1	Cement for mix	kg	6750.00000	4.22	28485.00
	Cement for incidentals @ 5 Kg / cum	kg	135.00000	4.22	569.70
2	Coarse aggregate 40mm	cum	12.15000	1441.00	17508.15
	Coarse aggregate 20 mm	cum	7.29000	1508.00	10993.32
	Coarse aggregate 10 mm	cum	4.86000	1098.00	5336.28
3	Fine aggregate (Un-Screened)	cum	10.80000	605.00	6534.00
4	Super Plasticizer	kg	27.00000	63.00	1701.00
5	Use rate of manual paver	sqm	270.00000	64.94	17533.80
Total Rs.					88661.25
Total cost of Materials				Rs.	88661.25

B. MACHINERY:

Sl.No	Particulars	Unit	Qty	Rate in Rs.	Amount
1	Concrete mixer 600/400 ltr (diesel)	Hour	16.00000	93.08	1489.28
	Fuel / Energy charges	Hour	16.00000	267.90	4286.40
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm die (petrol)	Hour	4.00000	8.39	33.56
	Fuel / Energy charges	Hour	4.00000	30.14	120.56
Total hire charges of Machinery				Rs.	6957.22

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	16.00000	347.10	5553.60
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Needle vibrator	Hour	16.00000	249.86	3997.76
5	work inspector	Day	1.00000	775.00	775.00
6	Mason Class-I	Day	2.00000	710.00	1420.00
7	Fitter	Day	1.00000	720.00	720.00
8	mazdoor				
	for batching materials	Day	22.00000	595.00	13090.00
	for loading mortar pans	Day	8.00000	595.00	4760.00
	for laying and moving paver	Day	6.00000	595.00	3570.00
	for conveying concrete	Day	27.00000	595.00	16065.00
	for cleaning/ washing/ curing	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	51502.08

labour component/unit qty	1907.50
Add contractor's profit and overhead charges	13.615% 259.70
labour component/unit qty (including contractor's profit)	<u>2167.20</u>

ABSTRACT:

A. Cost of Materials including royalty charges	Rs.	88661.25
B. Hire charges of Machinery	Rs.	6957.22
C. Cost of Labour	Rs.	51502.08
	Total Rs.	147120.55

D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	20030.46
Total cost for	27.00 cum	Rs:	167151.01
Rate per cum	(A+B+C+D)/27.0	Rs.	6190.78

IRR-CAW-7-12 Providing and **laying 100mm thick insitu vibrated M-10** (28 days cube compressive strength-not less than 10.00 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal lining using vibrating cylindertype mechanical paver** including cost of all materials machinery labour batching mixing placing in position forming contraction joints fixing pvc joint seiling strips shifting of paver from one side of canal to other side etc.complete with **1 km lead & all lifts.**

(Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),

CA : 0.90cum, Blending Ratio of CA~50:30:20, FA : 0.40 cum)

DATA: **RATE ANALYSIS** UNIT : **800 Sqm**

A. MATERIALS:

Sl.No	Particulars	Unit	Qty	Rate in Rs.	Amount
1	Cement 43 Gr	Kg	22000.00000	4.22	92840.00
2	Coarse aggregate 40 mm	cum	39.60000	1441.00	57063.60
	Coarse aggregate 20 mm	cum	23.76000	1508.00	35830.08
	Coarse aggregate 10 mm	cum	15.84000	1098.00	17392.32
3	Fine aggregate (Un-Screened)	cum	35.20000	605.00	21296.00
4	Super plasticiser	kg	88.00000	63.00	5544.00
5	PVC sealing strip	Rm	533.00000	44.00	23452.00
6	Use rate of paving cylinder	sqm	800.00000	1.08	864.00
Total cost of Materials				Rs.	254282.00

B. MACHINERY:

Sl.No	Particulars	Unit	Qty	Rate in Rs.	Amount
1	Batching plant	Hour	8.00000	396.19	3169.52
2	Transit mixer 3 Nos	Hour	24.00000	794.00	19056.00
	Fuel / Energy charges	Hour	24.00000	1473.48	35363.52
3	Mechanical paver	Hour	5.00000	351.40	1757.00
	lubricants etc @ 5%	Hour	5.00000	17.57	87.85
4	DG set for batching plant 50 KVA	Hour	8.00000	84.89	679.12
	Fuel / Energy charges	Hour	8.00000	1607.43	12859.44
5	DG set for paver 30 KVA	Hour	8.00000	67.95	543.60
	Fuel / Energy charges	Hour	8.00000	1071.63	8573.04
6	Shovel 0.5 cum / Loader	Hour	2.00000	1048.36	2096.72
	Fuel / Energy charges	Hour	2.00000	803.71	1607.42
7	Water tanker	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
8	Pump 5 hp (diesel) 2 Nos. 4 hrs each	Hour	8.00000	10.34	82.72
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
Total hire charges of Machinery				Rs.	94589.71

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Transit mixer	Hour	24.00000	443.04	10632.96
3	Crew for Concrete paver	Hour	8.00000	666.43	5331.44
4	Crew for DG set	Hour	16.00000	208.26	3332.16
5	Crew for Shovel	Hour	2.00000	369.20	738.40
6	Crew for Water tanker	Hour	8.00000	273.98	2191.84
7	Crew for Pump	Hour	8.00000	173.47	1387.76
8	Mason Class I	Day	2.00000	710.00	1420.00
9	Mechanic	Day	1.00000	720.00	720.00
10	Fitter	Day	1.00000	720.00	720.00
11	Electrician	Day	1.00000	790.00	790.00
12	work inspector	Day	2.00000	775.00	1550.00
13	mazdoor (BP site)	Day	5.00000	595.00	2975.00
14	mazdoor (Paver site)	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs:	42021.80

labour component/unit qty	52.50
Add contractor's profit and overhead charges	13.615% 7.10
labour component/unit qty (including contractor's profit)	<u>59.60</u>

ABSTRACT:

A. Cost of Materials				Rs.	254282.00
B. Hire charges of Machinery				Rs.	94589.71
C. Cost of Labour				Rs.	42021.80
				TOTAL Rs.	390893.51
Add for shifting & re-erection of BP @			2%	Rs.	7817.87
Add for LH / RH shifting & erection of Paver @			0.5%	Rs.	1954.47
Add for ledge cutting / erection of tracks etc @			1%	Rs.	3908.94
				Total	Rs: 404574.79
D. Add for contractor's profit and overheads on (A+B+C+other percentages)		13.615%			Rs: 55082.86
Lead Charges for 1 Km for FA	35.20	cum @	43.17	Rs./Cum	1519.71
Lead Charges for 1 Km for CA	79.20	cum @	41.51	Rs./Cum	3287.98

Total cost for		800.00	Sqm		Rs: 464465.34
Rate per	Sqm	(A+B+C+D)/800.0			Rs. 580.58

IRR-CAW-7-13 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N /sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal** including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts. (Cement content : 250 kg / cum)**
(Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement), CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA

RATE ANALYSIS

UNIT :

27.00 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	6750.00000	4.2200	28485.0000
	Cement for incidentals @ 5 kg / cum	kg	135.00000	4.2200	569.7000
2	Coarse aggregate 20-10 mm	cum	14.04000	1508.0000	21172.3200
	Coarse aggregate 10 mm below	cum	7.56000	1098.0000	8300.8800
3	Fine aggregate (Un-Screened)	cum	12.15000	605.0000	7350.7500
4	Super Plasticizer	kg	27.00000	63.0000	1701.0000
5	Use rate of manual paver	sqm	270.00000	64.9400	17533.8000
6	Sundries	LS	2.00000	41.0000	82.0000
Total cost of Materials					Rs: 85195.45

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 600/400 ltr (diesel)	Hour	16.00000	93.08	1489.28
	Fuel / Energy charges	Hour	16.00000	267.90	4286.40
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	16.00000	8.39	134.24
	Fuel / Energy charges	Hour	16.00000	30.14	482.24
Total hire charges of Machinery					Rs: 7419.58

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	16.00000	347.10	5553.60
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Vibrator	Hour	16.00000	249.86	3997.76
5	Mason Class-I	Day	2.00000	710.00	1420.00
6	work inspector	Day	1.00000	775.00	775.00
7	Fitter	Day	1.00000	720.00	720.00
8	mazdoor				
	for batching materials	Day	22.00000	595.00	13090.00
	for loading mortar pans	Day	8.00000	595.00	4760.00
	for laying and moving paver	Day	6.00000	595.00	3570.00
	for conveying concrete	Day	27.00000	595.00	16065.00
	for cleaning/ washing/ curing	Day	2.00000	595.00	1190.00
Total cost of Labour					Rs: 51502.08

labour component/unit qty	1907.50
Add contractor's profit and overhead charges	13.615% 259.70
labour component/unit qty (including contractor's profit)	2167.20

ABSTRACT:

A. Cost of Materials			Rs: 85195.45
B. Hire charges of Machinery			Rs: 7419.58
C. Cost of Labour			Rs: 51502.08
		Total	Rs: 144117.11

D. Add for contractor's profit and overheads on (A+B+C)		13.615%		Rs: 19621.54
Total cost for		27.00	cum	Rs: 163738.65
Rate per	cum	(A+B+C+D)/27.0		Rs. 6064.39

IRR-CAW-7-14 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal (150 mm thick)** including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**
(Cement content: 290 kg / cum for use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA

RATE ANALYSIS

UNIT :

24.92 cum

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	7226.80000	4.22	30497.10
	Cement for incidentals @ 5 kg / cum	kg	124.60000	4.22	525.81
2	Coarse aggregate 40-20 mm	cum	11.21400	1441.00	16159.37
	Coarse aggregate 20-10 mm	cum	6.72840	1508.00	10146.43
	Coarse aggregate 10 mm below	cum	4.48560	1098.00	4925.19
3	Fine aggregate (Un-Screened)	cum	9.96800	605.00	6030.64
4	Super Plasticizer	kg	28.90720	63.00	1821.15
5	Use rate of manual paver	sqm	166.14000	64.94	10789.13
6	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	80976.82

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 600/400 ltr (diesel)	Hour	16.00000	93.08	1489.28
	Fuel / Energy charges	Hour	16.00000	267.90	4286.40
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	16.00000	8.39	134.24
	Fuel / Energy charges	Hour	16.00000	30.14	482.24
Total hire charges of Machinery				Rs:	7419.58

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	16.00000	347.10	5553.60
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Vibrator	Hour	16.00000	249.86	3997.76
5	Mason Class-I	Day	2.00000	710.00	1420.00
6	work inspector	Day	1.00000	775.00	775.00
7	Fitter	Day	1.00000	720.00	720.00
8	mazdoor				
	for batching materials	Day	22.00000	595.00	13090.00
	for loading mortar pans	Day	8.00000	595.00	4760.00
	for laying	Day	6.00000	595.00	3570.00
	for conveying concrete	Day	24.92000	595.00	14827.40
	for cleaning/ washing/ curing	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	50264.48

labour component/unit qty

2017.00

Add contractor's profit and overhead charges

13.615% 274.60

labour component/unit qty (including contractor's profit)

2291.60

ABSTRACT:

A. Cost of Materials

Rs: 80976.82

B. Hire charges of Machinery

Rs: 7419.58

C. Cost of Labour

Rs: 50264.48

Total Rs: 138660.88

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 18878.68

Total cost for

24.92 cum

Rs: **157539.56**

Rate per cum

(A+B+C+D)/24.92

Rs. **6321.81**

IRR-CAW-7-15 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal(100 mm thick)** including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**
(Cement content: 300 kg / cum for use of super plasticiser(0.4% by wt. of cement),
CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.45 cum)

DATA

RATE ANALYSIS			UNIT : 23.10 cum		
A. MATERIALS:					
SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	6930.00000	4.22	29244.60
	Cement for incidentals @ 5 kg / cum	kg	115.50000	4.22	487.41
2	Coarse aggregate 20-10 mm	cum	12.01200	1508.00	18114.10
	Coarse aggregate 10 mm below	cum	6.46800	1098.00	7101.86
3	Fine aggregate (Un-Screened)	cum	10.39500	605.00	6288.98
4	Super Plasticizer	kg	27.72000	63.00	1746.36
6	Use rate of manual paver	sqm	231.00000	64.94	15001.14
7	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	78066.45
B. MACHINERY:					
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 600/400 ltr (diesel)	Hour	16.00000	93.08	1489.28
	Fuel / Energy charges	Hour	16.00000	267.90	4286.40
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	16.00000	8.39	134.24
	Fuel / Energy charges	Hour	16.00000	30.14	482.24
Total hire charges of Machinery				Rs:	7419.58
C. LABOUR:					
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	16.00000	347.10	5553.60
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Vibrator	Hour	16.00000	249.86	3997.76
5	Mason Class-I	Day	2.00000	710.00	1420.00
6	work inspector	Day	1.00000	775.00	775.00
7	Fitter	Day	1.00000	720.00	720.00
8	mazdoor				
	for batching materials	Day	22.00000	595.00	13090.00
	for loading mortar pans	Day	8.00000	595.00	4760.00
	for laying and moving paver	Day	6.00000	595.00	3570.00
	for conveying concrete	Day	23.10000	595.00	13744.50
	for cleaning/ washing/ curing	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	49181.58
labour component/unit qty			2129.10		
Add contractor's profit and overhead charges			13.615% 289.90		
labour component/unit qty (including contractor's profit)			2419.00		
ABSTRACT:					
A. Cost of Materials				Rs:	78066.45
B. Hire charges of Machinery				Rs:	7419.58
C. Cost of Labour				Rs:	49181.58
				Total	Rs: 134667.61
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	18335
Total cost for			23.10 cum	Rs:	153002.61
Rate per	cum	(A+B+C+D)/23.10		Rs.	6623.49

IRR-CAW-7-16 Providing and **laying150mm thick insitu vibrated M-15** (28 days cube compressive strength-not less than 15.00 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal lining using vibrating cylindertype mechanical paver** including cost of all materials machinery labour batching mixing placing in position forming contraction joints fixing pvc joint selling strips shifting of paver from one side of canal to other side etc.complete **with 1km lead & all lifts.**
(43 Gr Cement content: 300 kg /cum (45 kg/ sqm) for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.44 cum equivalent concrete volume:132 cum including the extra quantity of concrete for curvatures and bends etc..)

DATA:

RATE ANALYSIS		UNIT		: 800 Sqm	
A. MATERIALS:					
Sl.No	Particulars	Unit	Qty	Rate in Rs.	Amount
1	Cement 43 Gr	Kg	39600.00000	4.22	167112.00
2	Coarse aggregate 20 mm	cum	68.64000	1508.00	103509.12
	Coarse aggregate 10 mm	cum	36.96000	1098.00	40582.08
3	Fine aggregate (Un-Screened)	cum	58.08000	605.00	35138.40
4	Super plasticiser	kg	158.40000	63.00	9979.20
5	PVC sealing strip	Rm	533.00000	44.00	23452.00
6	Use rate of paving cylinder	sqm	800.00000	1.08	864.00
Total cost of Materials				Rs.	380636.80

B. MACHINERY:

Sl.No	Particulars	Unit	Qty	Rate in Rs.	Amount
1	Batching plant	Hour	8.00000	396.19	3169.52
2	Transit mixer 3 Nos	Hour	24.00000	794.00	19056.00
	Fuel / Energy charges	Hour	24.00000	1473.48	35363.52
3	Mechanical paver	Hour	5.00000	351.40	1757.00
	lubricants etc @ 5%	Hour	5.00000	17.57	87.85
4	DG set for batching plant 50 KVA	Hour	8.00000	84.89	679.12
	Fuel / Energy charges	Hour	8.00000	1607.43	12859.44
5	DG set for paver 30 KVA	Hour	8.00000	67.95	543.60
	Fuel / Energy charges	Hour	8.00000	1071.63	8573.04
6	Shovel 0.5 cum / Loader	Hour	2.00000	1048.36	2096.72
	Fuel / Energy charges	Hour	2.00000	803.71	1607.42
7	Water tanker	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
8	Pump 5 hp (diesel) 2 Nos. 4 hrs each	Hour	8.00000	10.34	82.72
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
Total hire charges of Machinery				Rs.	94589.71

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Batching plant	Hour	8.00000	535.28	4282.24
2	Crew for Transit mixer	Hour	24.00000	443.04	10632.96
3	Crew for Concrete paver	Hour	8.00000	666.43	5331.44
4	Crew for DG set	Hour	16.00000	208.26	3332.16
5	Crew for Shovel	Hour	2.00000	369.20	738.40
6	Crew for Water tanker	Hour	8.00000	273.98	2191.84
7	Crew for Pump	Hour	8.00000	173.47	1387.76
8	Mason Class I	Day	2.00000	710.00	1420.00
9	Mechanic	Day	1.00000	720.00	720.00
10	Fitter	Day	1.00000	720.00	720.00
11	Electrician	Day	1.00000	790.00	790.00
12	work inspector	Day	2.00000	775.00	1550.00
13	mazdoor (BP site)	Day	5.00000	595.00	2975.00
14	mazdoor (Paver site)	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs:	42021.80

labour component/unit qty

52.50

Add contractor's profit and overhead charges

13.615% 7.10

labour component/unit qty (including contractor's profit)

59.60**ABSTRACT**

A. Cost of Materials

Rs. 380636.80

B. Hire charges of Machinery

Rs. 94589.71

C. Cost of Labour

Rs. 42021.80

TOTAL Rs. 517248.31

Add for shifting & re-erection of BP @

2% Rs. 10344.97

Add for LH / RH shifting & erection of Paver @

0.5% Rs. 2586.24

Add for ledge cutting / erection of tracks etc @

1% Rs. 5172.48

Total Rs: 535352.00

D. Add for contractor's profit and overheads on (A+B+C+other percentages)

13.615% Rs: 72888.17

Lead Charges for 1 Km for FA

58.08

cum @

43.1737 Rs./Cum 2507.53

Lead Charges for 1 Km for CA

105.60

cum @

41.514921 Rs./Cum 4383.98

Total cost for

800.00 Sqm

Rs: **615131.68****Rate per Sqm**

(A+B+C+D)/800.0

Rs. **768.91**

IRR-CAW-7-17

Providing and fixing **pre-cast RCC template walls** consisting of 0.05 cum **M-15** grade concrete using **20 mm down size** coarse aggregates and 10 kg reinforcement steel moulded as per specifications and drawing in CM 1:4 proportion including cost of all materials, machinery, labour, formwork, fabricating and placing reinforcement steel, mixing, laying, conveying and fixing in position including necessary excavation for seating, finishing joints in CM 1:4, curing etc., complete **with initial lead upto 1 km and all lifts.**

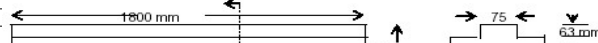
DATA

RATE ANALYSIS

UNIT :

20.00 template**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement 43 Gr	kg	310.00000	4.22	1308.20
2	Sand (Un-Screened)	cum	0.50000	605.00	302.50
3	Coarse aggregate 20-10 mm	cum	0.50000	1508.00	754.00
	Coarse aggregate 10-4.75 mm	cum	0.30000	1098.00	329.40
4	Reinforcement steel	kg	200.00000	59.00	11800.00
5	Binding wire	kg	3.00000	64.00	192.00
6	Use rate of mould	set	20.00000	100.08	2001.60
				41.00	41.00
				Rs:	16728.70



B. N		Rate in Rs.	Amount in Rs.
		5.69	45.52
		0.00	0.00
		DETAILS OF TEMPLATE WALL	
		Total hire charges of Machinery	
		Rs:	45.52

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class I for fixing	Day	1.00000	710.00	710.00
3	Mason Class II for casting	Day	2.00000	640.00	1280.00
4	Bar bender	Day	1.00000	850.00	850.00
5	mazdoor (casting yard)	Day	4.00000	595.00	2380.00
	mazdoor (for fixing)	Day	2.00000	595.00	1190.00
	mazdoor for conveying	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	8375.00

labour component/unit qty

418.80

Add contractor's profit and overhead charges

13.615% 57.00

labour component/unit qty (including contractor's profit)

475.80**ABSTRACT:**

A. Cost of Materials including serignorage charges

Rs: 16728.70

B. Hire charges of Machinery

Rs: 45.52

C. Cost of Labour

Rs: 8375.00

Total

Rs: 25149.22

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 3424.07

Lead Charges for 1 Km for FA

0.50

cum @

43.1737 Rs./Cum

21.59

Lead Charges for 1 Km for CA

0.80

cum @

41.514921 Rs./Cum

33.21

Lead Charges for 1Km for Steel (including Loading and Unloading Charges)

0.20

tonne @

279.4929 Rs./Tonne

55.9

Total cost for

20.00 template

Rs: 28683.99

Rate per template

(A+B+C+D)/20.0

Rs: 1434.20

IRR-CAW-7-18 Providing and fixing 50 mm dia perforated GI pressure relief pipes 12.50 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., **complete with all leads and lifts.**

DATA: Consider 10 Nos perforated 50 mm dia GI pipes 12.50 cm long each.

DATA

RATE ANALYSIS

UNIT :

10 Nos.

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	GI pipe 50 mm dia 10 Nos	Rm	1.25000	277.00	346.25
2	GI plate & Alluminium lid (hinged)	LS	10.00000	41.00	410.00
Total cost of Materials				Rs:	756.25

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling 8 mm dia holes	LS	0.50000	41.00	20.50
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	20.50

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Pipe fitter	Day	0.50000	795.00	397.50
	mazdoor	Day	0.50000	595.00	297.50
Total cost of Labour				Rs:	695.00

labour component/unit qty

69.50

Add contractor's profit and overhead charges

13.615% 9.50

labour component/unit qty (including contractor's profit)

79.00**ABSTRACT:**

A. Cost of Materials

Rs: 756.25

B. Hire charges of Machinery

Rs: 20.50

C. Cost of Labour

Rs: 695.00

Total

Rs: 1471.75

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 200.38

Total cost for

10.00 Nos.

Rs: 1672.13

Rate per each

(A+B+C+D)/10.0

Rs: 167.21

IRR-CAW-7-19 Providing and fixing 50 mm dia perforated GI pressure relief pipes 22.50 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., **complete with all leads and lifts.**

DATA

RATE ANALYSIS				UNIT : 10 Nos.	
A. MATERIALS:					
Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	GI pipe 50 mm dia 10 Nos	Rm	2.25000	277.00	623.25
2	GI plate & Alluminium lid (hinged)	LS	10.00000	41.00	410.00
Total cost of Materials				Rs:	1033.25
B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling 8 mm dia holes	LS	5.00000	41.00	205.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	205.00
C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Pipe fitter	Day	0.50000	795.00	397.50
	mazdoor	Day	0.50000	595.00	297.50
Total cost of Labour				Rs:	695.00
labour component/unit qty			69.50		
Add contractor's profit and overhead charges			13.615%	9.50	
labour component/unit qty (including contractor's profit)				79.00	
ABSTRACT:					
A. Cost of Materials				Rs:	1033.25
B. Hire charges of Machinery				Rs:	205.00
C. Cost of Labour				Rs:	695.00
Total				Rs:	1933.25
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	263.21
Total cost for			10.00 Nos.	Rs:	2196.46
Rate per	No.	(A+B+C+D)/10.0		Rs.	219.65

IRR-CAW-7-20 Providing and **fixing 50 mm dia perforated GI pressure relief pipes 30 cm long** with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all **leads and lifts.**

DATA

RATE ANALYSIS				UNIT : 10 Nos.	
A. MATERIALS:					
Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	GI pipe 50 mm dia 10 Nos	Rm	3.00000	277.00	831.00
2	GI plate & Alluminium lid (hinged)	LS	10.00000	41.00	410.00
Total cost of Materials				Rs:	1241.00
B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling 8 mm dia holes	LS	7.00000	41.00	287.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	287.00
C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Pipe fitter	Day	0.50000	795.00	397.50
	mazdoor	Day	0.50000	595.00	297.50
Total cost of Labour				Rs:	695.00
labour component/unit qty			69.50		
Add contractor's profit and overhead charges			13.615%	9.50	
labour component/unit qty (including contractor's profit)			79.00		
ABSTRACT:					
A. Cost of Materials				Rs:	1241.00
B. Hire charges of Machinery				Rs:	287.00
C. Cost of Labour				Rs:	695.00
Total				Rs:	2223.00
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	302.66
Total cost for			10.00 Nos.	Rs:	2525.66
Rate per	No.	(A+B+C+D)/10.0		Rs.	252.57

IRR-CAW-7-21 Providing and **fixing 50 mm dia perforated GI pressure relief pipes 45 cm long** with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all **leads and lifts.**

DATA

RATE ANALYSIS					
A. MATERIALS:			UNIT :		10 Nos.
Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	GI pipe 50 mm dia 10 Nos	Rm	4.50000	277.00	1246.50
2	GI plate & Aluminium lid (hinged)	LS	10.00000	41.00	410.00
Total cost of Materials				Rs:	1656.50
B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling 8 mm dia holes	LS	10.00000	41.00	410.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	410.00
C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Pipe fitter	Day	0.50000	795.00	397.50
	mazdoor	Day	0.50000	595.00	297.50
Total cost of Labour				Rs:	695.00
labour component/unit qty			69.50		
Add contractor's profit and overhead charges			13.615% 9.50		
labour component/unit qty (including contractor's profit)			79.00		
ABSTRACT:					
A. Cost of Materials				Rs:	1656.50
B. Hire charges of Machinery				Rs:	410.00
C. Cost of Labour				Rs:	695.00
Total				Rs:	2761.50
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	375.98
Total cost for			10.00 Nos.	Rs:	3137.48
Rate per	No.	(A+B+C+D)/10.0		Rs.	313.75

IRR-CAW-7-22 Providing and **fixing 50 mm dia perforated GI pressure relief pipes 75 cm long** with one end closed with perforated GI plate and other end provided with aluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all **leads and lifts.**

DATA

RATE ANALYSIS					
A. MATERIALS:			UNIT :		10 Nos.
Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	GI pipe 50 mm dia	Rm	7.50000	277.00	2077.50
2	GI plate & Aluminium lid (hinged)	LS	10.00000	41.00	410.00
Total cost of Materials				Rs:	2487.50
B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Drilling 8 mm dia holes	LS	15.00000	41.00	615.00
			0.00000		0.00
Total hire charges of Machinery				Rs:	615.00
C. LABOUR:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Pipe fitter	Day	0.50000	795.00	397.50
2	mazdoor	Day	0.50000	595.00	297.50
Total cost of Labour				Rs:	695.00
labour component/unit qty			69.50		
Add contractor's profit and overhead charges			13.615% 9.50		
labour component/unit qty (including contractor's profit)			79.00		
ABSTRACT:					
A. Cost of Materials				Rs:	2487.50
B. Hire charges of Machinery				Rs:	615.00
C. Cost of Labour				Rs:	695.00
Total				Rs:	3797.50
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	517.03
Total cost for			10.00 Nos.	Rs:	4314.53
Rate per	No.	(A+B+C+D)/10.0		Rs.	431.45

IRR-CAW-7-23 Providing and **fixing 100 mm dia perforated PVC pipes 40 cm long for Weep holes** including cost of all materials, labour, drilling 8 mm dia holes etc. complete with all **leads and lifts.**

DATA

RATE ANALYSIS

UNIT:

10 Nos.

A. MATERIALS:

Sl.No	Particulars	Unit	Qty	Rate in Rs	Amount in Rs.
1	PVC pipe 100 mm dia 10 Nos	Rm	10.00000	163.00	1630.00
Total cost of Materials				Rs.	1630.00

B. MACHINERY

Sl.No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs.	0.00

C. LABOUR

Sl.No	Particulars	Unit	Qty	Rate in Rs	Amount in Rs.
1	Pipe fitter	Day	0.25000	795.00	198.75
2	Mazdoor	Day	0.25000	595.00	148.75
Total cost of Labour				Rs.	347.50

labour component/unit qty

34.80

Add contractor's profit and overhead charges

13.615% 4.70

labour component/unit qty (including contractor's profit)

39.50

ABSTRACT

A. Cost of Materials	Rs.	1630.00
B. Hire charges of Machinery	Rs.	0.00
C. Cost of Labour	Rs.	347.50
Total	Rs.	1977.50

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 269.24

Total cost for

10.00 Nos.

Rs: 2246.74

Rate per No.

(A+B+C+D)/10.0

Rs. 224.67

IRR-CAW-7-24

Drilling 32 mm dia pressure relief hole below pressure relief pipe for bed and side lining of canal laid on rock including cost of all materials, machinery, labour etc., complete with all leads and lifts.

DATA:

RATE ANALYSIS

UNIT :

10 Nos.

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of drill rod 1.6 m long	Rm	10.00000	31.16	311.60
	Reconditioning charges @		10%		31.16
2	Use rate of air hose 2 Nos.	Hour	2.00000	12.19	24.38
Total cost of Materials				Rs:	367.14

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Air compressor 8.5 cmm diesel	Hour	1.00000	280.01	280.01
	Fuel / Energy charges	Hour	1.00000	1506.96	1506.96
2	Jack hammer 2 Nos.	Hour	2.00000	19.11	38.22
	Fuel / Energy charges	Hour	2.00000	0.00	0.00
Total hire charges of Machinery				Rs:	1825.19

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Air compressor	Hour	1.00000	333.22	333.22
2	Crew for Jack hammer	Hour	2.00000	520.65	1041.30
Total cost of Labour				Rs:	1374.52

labour component/unit qty

137.50

Add contractor's profit and overhead charges

13.615% 18.70

labour component/unit qty (including contractor's profit)

156.20

ABSTRACT:

A. Cost of Materials	Rs:	367.14
B. Hire charges of Machinery	Rs:	1825.19
C. Cost of Labour	Rs:	1374.52
Total	Rs:	3566.85

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 485.63

Total cost for

10.00 Nos.

Rs: 4052.48

Rate per No.

(A+B+C+D)/10.0

Rs. 405.25

IRR-CAW-7-25

Providing and forming 35 x 35 x 40 cm deep filter drain consisting of 75 mm thick 10 mm down coarse aggregate around pressure relief pipe and 75 mm thick sand around coarse aggregate filter including cost of all materials, labour, excavation of pit etc., complete with lead upto 50 m and all lifts.

DATA

RATE ANALYSIS					
				UNIT :	10 Nos.
A. MATERIALS:					
SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Coarse aggregate 10-4.75 mm	cum	0.15000	1098.00	164.70
2	Sand (Un-Screened)	cum	0.35000	605.00	211.75
Total cost of Materials				Rs:	376.45
B. MACHINERY:					
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00
C. LABOUR:					
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	0.10000	640.00	64.00
2	mazdoor	Day	0.10000	595.00	59.50
Total cost of Labour				Rs:	123.50
labour component/unit qty			12.40		
Add contractor's profit and overhead charges			13.615%	1.70	
labour component/unit qty (including contractor's profit)			14.10		
ABSTRACT:					
A. Cost of Materials				Rs:	376.45
B. Hire charges of Machinery				Rs:	0.00
C. Cost of Labour				Rs:	123.50
Total				Rs:	499.95
D. Add for contractor's profit and overheads on (A+B+C)				13.615%	Rs: 68.07
Total cost for				10.00 Nos.	Rs: 568.02
Rate per	No.	(A+B+C+D)/10.0			Rs: 56.80

IRR-CAW-7-26 Providing and fixing 25 to 40 mm thick Shahabad / Talikota / other similar stone slabs with pointing and finishing joints neatly in CM 1:3 proportion for canal / field channel lining including cutting slabs to required size, mixing mortar, finishing joints neatly, curing etc., complete with lead upto 50 m and all lifts.

DATA:

RATE ANALYSIS					
				UNIT :	100.00 sqm
A. MATERIALS:					
SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Shahabad Stone slabs	sqm	105.00000	299.00	31395.00
2	Cement 43 Gr	kg	200.00000	4.22	844.00
3	Sand (Screened)	cum	0.40000	728.00	291.20
Total cost of Materials				Rs:	32530.20
B. MACHINERY:					
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	5 hp pump (diesel)	Hour	2.00000	10.34	20.68
	Fuel / Energy charges	Hour	2.00000	133.95	267.90
Total hire charges of Machinery				Rs:	288.58
C. LABOUR:					
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Operator pump	Hour	2.00000	173.47	346.94
2	work inspector	Day	1.00000	775.00	775.00
3	Mason Class I	Day	4.00000	710.00	2840.00
4	Mason Class II	Day	2.00000	640.00	1280.00
5	mazdoor	Day	8.00000	595.00	4760.00
6	Cartman with Double Bullock cart for water	Day	1.00000	710.00	710.00
Total cost of Labour				Rs:	10711.94
labour component/unit qty			107.10		
Add contractor's profit and overhead charges			13.615%	14.60	
labour component/unit qty (including contractor's profit)			121.70		
ABSTRACT:					
A. Cost of Materials				Rs:	32530.20
B. Hire charges of Machinery				Rs:	288.58
C. Cost of Labour				Rs:	10711.94
Total				Rs:	43530.72
D. Add for contractor's profit and overheads on (A+B+C)				13.615%	Rs: 5926.71
Total cost for				100.00 sqm	Rs: 49457.43
Rate per	sqm	(A+B+C+D)/100.0			Rs: 494.57

IRR-CAW-7-27 **Fixing PCC slabs** of various sizes in **CM 1 : 3** proportion to the side slopes of canal including preparing bed, flush pointing joints in CM 1 : 3 propn, cost of all materials (excluding PCC slabs), labour, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement 43 Gr	kg	240.00000	4.22	1012.80
2	Sand (Screened)	cum	0.50000	728.00	364.00
Total cost of Materials				Rs:	1376.80

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	5 hp pump (diesel)	Hour	2.00000	10.34	20.68
	Fuel / Energy charges	Hour	2.00000	133.95	267.90
Total hire charges of Machinery				Rs:	288.58

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Operator pump	Hour	2.00000	173.47	346.94
2	work inspector	Day	1.00000	775.00	775.00
3	Mason Class I	Day	4.00000	710.00	2840.00
4	mazdoor	Day	9.00000	595.00	5355.00
5	Cartman with Double Bullock cart for water	Day	1.00000	710.00	710.00
Total cost of Labour				Rs:	10026.94

labour component/unit qty

100.30

Add contractor's profit and overhead charges

13.615% 13.70

labour component/unit qty (including contractor's profit)

114.00**ABSTRACT:**

A. Cost of Materials

Rs: 1376.80

B. Hire charges of Machinery

Rs: 288.58

C. Cost of Labour

Rs: 10026.94

Total Rs: **11692.32**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1591.91

Total cost for

100.00 sqm

Rs: **13284.23****Rate per sqm**

(A+B+C+D)/100.0

Rs. **132.84**

IRR-CAW-7-28 **Fixing PCC lug slabs** of various sizes in **CM 1 : 3** proportion for supporting PCC slab lining including necessary excavation, refilling, flush pointing joints in CM 1 : 3 propn, cost of all materials (excluding PCC lug slabs), labour, finishing, curing etc., complete with initial lead **upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

100.00 Rm**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement 43 Gr	kg	58.00000	4.22	244.76
2	Sand (Screened)	cum	0.1200	728.00	87.36
Total cost of Materials				Rs:	332.12

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	5 hp pump (diesel)	Hour	1.00000	10.34	10.34
	Fuel / Energy charges	Hour	1.00000	133.95	133.95
Total hire charges of Machinery				Rs:	144.29

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Operator pump	Hour	1.00000	173.47	173.47
2	work inspector	Day	1.00000	775.00	775.00
3	Mason Class I	Day	2.00000	710.00	1420.00
4	Mason Class II	Day	1.00000	640.00	640.00
5	mazdoor	Day	5.00000	595.00	2975.00
6	Cartman with Double Bullock cart for water	Day	1.00000	710.00	710.00
Total cost of Labour				Rs:	6693.47

labour component/unit qty

66.90

Add contractor's profit and overhead charges

13.615% 9.10

labour component/unit qty (including contractor's profit)

76.00

ABSTRACT:

A. Cost of Materials				Rs:	332.12
B. Hire charges of Machinery				Rs:	144.29
C. Cost of Labour				Rs:	6693.47
				Rs:	7169.88
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Total	
Total cost for		100.00 Rm		Rs:	976.18
Rate per Rm		(A+B+C+D)/100.0		Rs:	8146.06
				Rs:	81.46

IRR-CAW-7-29 **Fixing 30 cm height pre-cast drops for field channels as directed including excavation, etc., complete with all leads and lifts.**

DATA: **RATE ANALYSIS** UNIT : 7 Nos.

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Cl- II	Day	1.00000	640.00	640.00
3	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	2010.00

labour component/unit qty 287.10

Add contractor's profit and overhead charges 13.615% 39.10

labour component/unit qty (including contractor's profit) **326.20**

ABSTRACT:

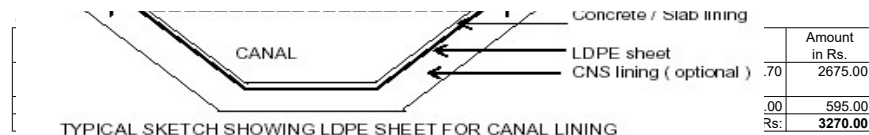
A. Cost of Materials				Rs:	0.00
B. Hire charges of Machinery				Rs:	0.00
C. Cost of Labour				Rs:	2010.00
				Total	Rs: 2010.00
D. Add for contractor's profit and overheads on (A+B+C)			13.615%	Rs:	273.66
Total cost for		7.00 Nos.		Rs:	2283.66
Rate per No.		(A+B+C+D)/7.00		Rs.	326.24

IRR-CAW-7-30 Providing and **fixing LDPE sheet for bed and sides of canal** including cost of all materials, labour, laying, joining etc., complete **with all leads and lifts.**
a. **Using 500 micron thick LDPE sheet.**

DATA: **RATE ANALYSIS** UNIT : 250.00 sqm

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate	Amount in Rs.
	FSL			.00	29425.00
	Concrete / Slab lining			.00	196.00
				Rs:	29621.00
	CANAL				
	LDPE sheet				Amount in Rs.
	75 mm thick sand backing (optional)			.00	0.00
				.00	0.00
				Rs:	0.00
	FSL				
	Concrete / Slab lining				



labour component/unit qty (including contractor's profit) 14.90

ABSTRACT:

A. Cost of Materials	Rs:	29621.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	3270.00
	Total	Rs: 32891.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 4478.11
Total cost for	250.00 sqm	Rs: 37369.11
Rate per sqm	(A+B+C+D)/250.0	Rs. 149.48

Note : i) If the surface on which the LDPE sheet is to be laid is too rough and undulating provide average 75 mm thick sand backing to LDPE sheet.

For providing average 75 mm thick sand backing :

RATE ANALYSISUNIT : **250.00 sqm****A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Sand for filling	cum	18.75000	460.00	8625.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	8625.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nill		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	3570.00

labour component/unit qty 14.30
 Add contractor's profit and overhead charges 13.615%
 labour component/unit qty (including contractor's profit) 1.90
16.20

ABSTRACT:

A. Cost of Materials	Rs:	8625.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	3570.00
	Total	Rs: 12195.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 1660.35
Total cost for	250.00 sqm	Rs: 13855.35
Rate per sqm	(A+B+C+D)/250.0	Rs. 55.42

IRR-CAW-7-31 Providing and **fixing LDPE sheet for bed and sides of canal** including cost of all materials, labour, laying, joining etc., complete **with all leads and lifts.**

b. **Using 750 micron thick LDPE sheet.**

DATA:

RATE ANALYSISUNIT : **250.00 sqm****A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	LDPE sheet 750 micron thick	sqm	275.00000	152.00	41800.00
2	Bitumen 85 / 25 and 80 / 100 Gr	kg	4.00000	49.00	196.00
Total cost of Materials				Rs:	41996.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nill		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Joining & laying @ 10 % of sheet cost	sqm	250.00000	15.20	3800.00
2	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	4395.00

labour component/unit qty 17.60
 Add contractor's profit and overhead charges 13.615%
 labour component/unit qty (including contractor's profit) 2.40
20.00

ABSTRACT:

A. Cost of Materials			Rs:	41996.00
B. Hire charges of Machinery			Rs:	0.00
C. Cost of Labour			Rs:	4395.00
			Total	Rs: 46391.00

D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	6316.13
Total cost for	250.00 sqm		Rs:	52707.13
Rate per	sqm	(A+B+C+D)/250.0	Rs.	210.83

Note : i) If the surface on which the LDPE sheet is to be laid is too rough and undulating provide average 75 mm thick unscreened sand backing to LDPE sheet.
For providing average 75 mm thick sand backing add per sqm Rs: **55.42**

IRR-CAW-7-32 Providing and **fixing LDPE sheet for bed and sides of canal** including cost of all materials, labour, laying, joining etc., complete **with all leads and lifts.**
Using 1000 micron thick LDPE sheet.

DATA:

RATE ANALYSISUNIT : **250.00 sqm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	LDPE sheet 1000 micron thick	sqm	275.00000	211.00	58025.00
2	Bitumen 85 / 25 and 80 / 100 Gr	kg	4.00000	49.00	196.00
Total cost of Materials				Rs:	58221.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Joining & laying @ 10 % of sheet cost	sqm	250.00000	21.10	5275.00
2	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	5870.00

labour component/unit qty 23.50
Add contractor's profit and overhead charges 13.615% 3.20
labour component/unit qty (including contractor's profit) **26.70**

ABSTRACT:

A. Cost of Materials			Rs:	58221.00
B. Hire charges of Machinery			Rs:	0.00
C. Cost of Labour			Rs:	5870.00
			Total	Rs: 64091.00

D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	8725.99
Total cost for	250.00 sqm		Rs:	72816.99
Rate per	sqm	(A+B+C+D)/250.0	Rs.	291.27

Note : i) If the surface on which the LDPE sheet is to be laid is too rough and undulating provide average 75 mm thick unscreened sand backing to LDPE sheet.
For providing average 75 mm thick sand backing add per sqm Rs: **55.42**

IRR-CAW-7-33 Providing and **fixing 12 mm thick 380 mm depth tarfelt expansion joint filler boards for stone masonry lining of canal** including cost of all materials, labour etc., complete with all **leads and lifts.**

DATA: Consider 100 m length of expansion joint.
Tarfelt joint filler board with 2 % wastage (100 x 0.38 x 1.02) : 38.75 sqm

DATA

RATE ANALYSISUNIT : **100.00 Rm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tarfelt joint filler board 12 mm thick	sqm	38.75000	434.00	16817.50
			0.00000	0.00	0.00
Total cost of Materials				Rs:	16817.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Carpenter CI- II	Day	1.00000	640.00	640.00
2	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	1235.00

labour component/unit qty	12.40
Add contractor's profit and overhead charges	13.615% 1.70
labour component/unit qty (including contractor's profit)	14.10

ABSTRACT:

A. Cost of Materials	Rs:	16817.50
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	1235.00
Total	Rs:	18052.50

D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	2457.85
Total cost for	100.00 Rm	Rs:	20510.35
Rate per Rm	(A+B+C+D)/100.00	Rs:	205.10

IRR-CAW-7-34 Providing and fixing 20 mm thick 100 mm depth **tarfelt expansion joint filler boards for cement concrete lining of canal** including cost of all materials, labour etc., complete with all **leads and lifts.**

DATA: Consider 100 m length of expansion joint.
Tarfelt joint filler board (100 x 0.10) : 10.00 sqm

DATA **RATE ANALYSIS** UNIT : **100.00 Rm**

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tarfelt joint filler board 20 mm thick	sqm	10.00000	670.00	6700.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	6700.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Carpenter CI- II	Day	1.00000	640.00	640.00
2	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	1235.00

labour component/unit qty	12.40
Add contractor's profit and overhead charges	13.615% 1.70
labour component/unit qty (including contractor's profit)	14.10

ABSTRACT:

A. Cost of Materials	Rs:	6700.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	1235.00
Total	Rs:	7935.00

D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	1080.35
Total cost for	100.00 Rm	Rs:	9015.35
Rate per Rm	(A+B+C+D)/100.00	Rs:	90.20

IRR-CAW-7-35 Providing and fixing 20 mm thick 150 mm depth **tarfelt expansion joint filler boards for cement concrete lining of canal** including cost of all materials, labour etc., complete with all **leads and lifts.**

DATA: **RATE ANALYSIS** UNIT : **100.00 Rm**

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tarfelt joint filler board 20 mm thick	sqm	15.30000	670.00	10251.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	10251.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Carpenter Cl- II	Day	1.00000	640.00	640.00
2	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	1235.00

labour component/unit qty 12.40
 Add contractor's profit and overhead charges 13.615% 1.70
 labour component/unit qty (including contractor's profit) **14.10**

ABSTRACT:

A. Cost of Materials	Rs:	10251.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	1235.00
Total	Rs:	11486.00

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 1563.82
 Total cost for 100.00 Rm Rs: **13049.82**
Rate per Rm (A+B+C+D)/100.00 Rs. 130.50

IRR-CAW-7-36 Providing and forming 35 mm wide and 10 mm thick construction / contraction joints for concrete lining by mastic filler including cost of all materials, labour etc., complete with all leads and lifts.

DATA:

RATE ANALYSISUNIT : **100.00 Rm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Asphalt 80/100 Gr	kg	35.00000	49.00	1715.00
	Sand (Screened)	cum	0.04000	728.00	29.12
Total cost of Materials				Rs:	1744.12

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	0.50000	640.00	320.00
2	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	915.00

labour component/unit qty 9.20
 Add contractor's profit and overhead charges 13.615% 1.30
 labour component/unit qty (including contractor's profit) **10.50**

ABSTRACT:

A. Cost of Materials	Rs:	1744.12
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	915.00
Total	Rs:	2659.12

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 362.04
 Total cost for 100.00 Rm Rs: **3021.16**
Rate per Rm (A+B+C+D)/100.00 Rs. 30.21

IRR-CAW-7-37 Manufacturing 550 x 550 x 55 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N /sqmm) cement concrete using 20 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plasticizer (0.4% by wt. of cement), CA : 0.80 cum, Blending Ratio of CA : 65:35, FA : 0.45cum equivalent concrete volume: 3.74 cum)

DATA:

RATE ANALYSISUNIT : **225 Nos.****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	1122.00000	4.22	4734.84
	Cement for incidentals @ 1 kg / slab	kg	225.00000	4.22	949.50
2	Coarse aggregate 20-10 mm	cum	1.94480	1508.00	2932.76
	Coarse aggregate 10 mm below	cum	1.04720	1098.00	1149.83
3	Fine aggregate (Un-Screened)	cum	1.68300	605.00	1018.22
4	Super Plasticizer	kg	4.48800	63.00	282.74
5	Use rate of moulds for 500 uses	No.	225.00000	7.32	1647.00
Total cost of Materials				Rs:	12714.89

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.10000	10.34	1.03
	Fuel / Energy charges	Hour	0.10000	133.95	13.40
3	Water tanker 8000 ltr	Hour	0.20000	448.93	89.79
	Fuel / Energy charges	Hour	0.20000	506.34	101.27
	Total hire charges of Machinery				Rs: 1714.69
	Aportioned hire charges of machinery for lining slab		90%	Rs:	1543.22

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.10000	173.47	17.35
3	Crew for Water tanker	Hour	0.20000	273.98	54.80
4	Mason Class-I	Day	2.00000	710.00	1420.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials / laying CC	Day	3.00000	595.00	1785.00
	for demoulding / oiling / laying	Day	2.00000	595.00	1190.00
	for shifting slabs to curing pond	Day	1.00000	595.00	595.00
	for stacking after curing	Day	1.00000	595.00	595.00
	for cleaning & miscellaneous	Day	1.00000	595.00	595.00
	Total cost of Labour				Rs: 9803.95
	Aportioned cost of labour for lining slabs		90%	Rs:	8823.56

labour component/unit qty	39.20
Add contractor's profit and overhead charges	13.615% 5.30
labour component/unit qty (including contractor's profit)	44.50

ABSTRACT:

A. Cost of Materials		Rs:	12714.89
B. Hire charges of Machinery		Rs:	1543.22
C. Cost of Labour		Rs:	8823.56
	Total	Rs:	23081.67
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	3142.57
Total cost for	225.00 Nos.	Rs:	26224.24
Rate per each	(A+B+C+D)/225.0	Rs:	116.55

IRR-CAW-7-38 **Manufacturing 550 x 300 x 55 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 20 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plasticizer (0.4% by wt. of cement), CA : 0.80 cum, Blending Ratio of CA : 65:35, FA : 0.45cum, equivalent concrete volume: 0.23 cum)**

DATA:

RATE ANALYSIS

UNIT :

25 Nos.

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	69.00000	4.22	291.18
	Cement for incidentals @ 0.5 kg/slab	kg	12.50000	4.22	52.75
2	Coarse aggregate 20-10 mm	cum	0.11960	1508.00	180.36
	Coarse aggregate 10 mm below	cum	0.06440	1098.00	70.71
3	Fine aggregate (Un-Screened)	cum	0.10350	605.00	62.62
4	Super Plasticizer	kg	0.27600	63.00	17.39
5	Use rate of moulds for 500 uses	No.	25.00000	4.57	114.25
	Total cost of Materials			Rs:	789.26

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.10000	10.34	1.03
	Fuel / Energy charges	Hour	0.10000	133.95	13.40
3	Water tanker 8000 ltr	Hour	0.20000	448.93	89.79
	Fuel / Energy charges	Hour	0.20000	506.34	101.27
	Total hire charges of Machinery				Rs: 1714.69
	Aportioned hire charges of machinery for lug slabs		10%	Rs:	171.47

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.10000	173.47	17.35
3	Crew for Water tanker	Hour	0.20000	273.98	54.80
4	Mason Class-I	Day	2.00000	710.00	1420.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials / laying CC	Day	3.00000	595.00	1785.00
	for demoulding / oiling / laying	Day	2.00000	595.00	1190.00
	for shifting slabs to curing pond	Day	1.00000	595.00	595.00
	for stacking after curing	Day	1.00000	595.00	595.00
	for cleaning & miscellaneous	Day	1.00000	595.00	595.00
	Total cost of Labour			Rs:	9803.95
	Aportioned cost of labour for lug slabs		10%	Rs:	980.40

labour component/unit qty	39.20
Add contractor's profit and overhead charges	13.615% 5.30
labour component/unit qty (including contractor's profit)	44.50

ABSTRACT:

A. Cost of Materials	Rs:	789.26
B. Hire charges of Machinery	Rs:	171.47
C. Cost of Labour	Rs:	980.40
Total	Rs:	1941.13

D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	264.28
Total cost for	25.00 Nos.	Rs:	2205.41
Rate per each	(A+B+C+D)/25.0	Rs.	88.22

IRR-CAW-7-39 **Manufacturing 450 x 300 x 30 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plasticizer (0.4% by wt. of cement), CA : 0.68 cum, FA : 0.43cum)**

DATA:

RATE ANALYSIS

UNIT :

225 Nos.**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	270.00000	4.22	1139.40
	Cement for incidentals @ 0.5 kg/slab	kg	112.50000	4.22	474.75
2	Coarse aggregate 10 mm below	cum	0.61200	1098.00	671.98
3	Fine aggregate (Un-Screened)	cum	0.38700	605.00	234.14
4	Super Plasticizer	kg	1.08000	63.00	68.04
5	Use rate of moulds for 250 uses	No.	225.00000	3.04	684.00
	Total cost of Materials			Rs:	3272.31

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hand mixer 45 / 30 ltr	Hour	8.00000	5.69	45.52
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
2	5 hp pump (diesel)	Hour	0.10000	10.34	1.03
	Fuel / Energy charges	Hour	0.10000	133.95	13.40
3	Water tanker 8000 ltr	Hour	0.20000	448.93	89.79
	Fuel / Energy charges	Hour	0.20000	506.34	101.27
	Total hire charges of Machinery			Rs:	251.01
	Aportioned hire charges of machinery for lining slab		90%	Rs:	225.91

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Pump	Hour	0.10000	173.47	17.35
2	Crew for Water tanker	Hour	0.20000	273.98	54.80
3	Mason Class-I	Day	2.00000	710.00	1420.00
4	work inspector	Day	1.00000	775.00	775.00
5	mazdoor				
	for batching / mixing / laying	Day	2.00000	595.00	1190.00
	for demoulding / cleaning / oiling	Day	2.00000	595.00	1190.00
	for shifting slabs to curing pond	Day	1.00000	595.00	595.00
	for stacking after curing	Day	1.00000	595.00	595.00
	for cleaning & miscellaneous	Day	1.00000	595.00	595.00
	Total cost of Labour			Rs:	6432.15
	Aportioned cost of labour for lining slabs		90%	Rs:	5788.94

labour component/unit qty	25.70
Add contractor's profit and overhead charges	13.615% 3.50
labour component/unit qty (including contractor's profit)	29.20

ABSTRACT:

A. Cost of Materials				Rs:	3272.31
B. Hire charges of Machinery				Rs:	225.91
C. Cost of Labour				Rs:	5788.94
			Total	Rs:	9287.16
D. Add for contractor's profit and overheads on (A+B+C)		13.615%		Rs:	1264.45
Total cost for		225.00 Nos.		Rs:	10551.61
Rate per	each	(A+B+C+D)/225.0		Rs.	46.90

IRR-CAW-7-40 **Manufacturing 450 x 150 x 30 mm size PCC lug slabs in M-15 grade** (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using **10 mm down graded** coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with **initial lead upto 50 m and all lifts.**
(**Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement),**
CA : 0.68 cum, FA : 0.43cum)

DATA:

RATE ANALYSIS

UNIT :

25 Nos.**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	15.00000	4.22	63.30
	Cement for incidentals @ 0.3 kg/slab	kg	7.50000	4.22	31.65
2	Coarse aggregate 10 mm below	cum	0.03400	1098.00	37.33
3	Fine aggregate (Un-Screened)	cum	0.02150	605.00	13.01
4	Super Plasticizer	kg	0.06000	63.00	3.78
5	Use rate of moulds for 250 uses	No.	25.00000	1.67	41.75
Total cost of Materials				Rs:	190.82

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hand mixer 45 / 30 ltr	Hour	8.00000	5.69	45.52
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
2	5 hp pump (diesel)	Hour	0.10000	10.34	1.03
	Fuel / Energy charges	Hour	0.10000	133.95	13.40
3	Water tanker 8000 ltr	Hour	0.20000	448.93	89.79
	Fuel / Energy charges	Hour	0.20000	506.34	101.27
Total hire charges of Machinery				Rs:	251.01
	Aportioned hire charges of machinery for lug slabs		10%	Rs:	25.10

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Pump	Hour	0.10000	173.47	17.35
2	Crew for Water tanker	Hour	0.20000	273.98	54.80
3	Mason Class-I	Day	2.00000	710.00	1420.00
4	work inspector	Day	1.00000	775.00	775.00
5	mazdoor				
	for batching / mixing / laying	Day	2.00000	595.00	1190.00
	for demoulding / cleaning / oiling	Day	2.00000	595.00	1190.00
	for shifting slabs to curing pond	Day	1.00000	595.00	595.00
	for stacking after curing	Day	1.00000	595.00	595.00
	for cleaning & miscellaneous	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	6432.15
	Aportioned cost of labour for lug slabs		10%	Rs:	643.22

labour component/unit qty	25.70
Add contractor's profit and overhead charges	13.615% 3.50
labour component/unit qty (including contractor's profit)	29.20

ABSTRACT:

A. Cost of Materials				Rs:	190.82
B. Hire charges of Machinery				Rs:	25.10
C. Cost of Labour				Rs:	643.22
			Total	Rs:	859.14
D. Add for contractor's profit and overheads on (A+B+C)		13.615%		Rs:	116.97
Total cost for		25.00 Nos.		Rs:	976.11
Rate per	each	(A+B+C+D)/25.0		Rs.	39.04

IRR-CAW-7-41 **Manufacturing 600 x 300 x 100mm size PCC lining slabs in M-15 grade** (28 days cube compressive strength not less than 15 N/Sqmm) cement concrete using **20mm down grades** coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with **initial lead upto 50 m and all lifts.**
(**Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement),**
CA : 0.80 cum, FA : 0.45cum, Blending Ratio of CA-65:35)

DATA:

RATE ANALYSISUNIT: **225**

Nos.

A. MATERIALS :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	Kg	1215.00000	4.22	5127.30
2	Cement for incidentals @ 0.5kg/slab	Kg	112.50000	4.22	474.75
3	Coarse aggregate 20 mm below	Cum	2.10600	1508.00	3175.85
4	Coarse aggregate 10 mm below	Cum	1.13400	1098.00	1245.13
5	Fine aggregate (Un-Screened)	Cum	1.82250	605.00	1102.61
6	Super Plasticizer	kg	4.86000	63.00	306.18
7	Use rate of moulds for 250 uses	No.	225.00000	7.20	1620.00
Total Cost of Materials				Rs.	13051.82

B. MACHINERY :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Diesel mixer 300/200	Hour	8.00000	54.70	437.60
	Fuel/Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.10000	10.34	1.03
	Fuel/Energy charges	Hour	0.10000	133.95	13.40
3	Water tanker 8000 ltr	Hour	0.20000	448.93	89.79
	Fuel/Energy charges	Hour	0.20000	506.34	101.27
Total hire charges of Machinery				Rs.	1714.69
	Aportioned hire charges of machinery @ 90% for lining slab Rs.		90%		1543.22

C. LABOUR :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Pump	Hour	0.10000	173.47	17.35
2	Crew for water tanker	Hour	0.20000	273.98	54.80
3	Mason Class-I	Day	2.00000	710.00	1420.00
4	Class II Mason	Day	1.00000	640.00	640.00
5	Mazdoor				
	For batching materials/laying	Day	2.00000	595.00	1190.00
	For demoulding/cleaning/oiling		2.00000	595.00	1190.00
	For shifting slabs to curing pond		1.00000	595.00	595.00
	For stacking after curing		1.00000	595.00	595.00
	For cleaning & miscellaneous	Day	1.00000	595.00	595.00
Total Cost of Labour				Rs.	6297.15
	Aportioned cost of labour for lining slabs Rs.		90%		5667.44

labour component/unit qty	25.20
Add contractor's profit and overhead charges	13.615% 3.40
labour component/unit qty (including contractor's profit)	28.60

ABSTRACT :

A. Cost of Materials	Rs.	13051.82
B. Hire Charges of machinery	Rs.	1543.22
C. Cost of Labour	Rs.	5667.44
Total	Rs:	20262.48

D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	2758.74
Total cost for	225.00 Nos.	Rs:	23021.22
Rate per each	(A+B+C+D)/225.0	Rs.	102.32

IRR-CAW-7-42 **Manufacturing 400 x 400 x 30 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm)cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts.**
(Cement content : 300 kg / cum with super plasticizer (0.4% by wt. of cement),
CA : 0.68 cum, FA : 0.43cum)

DATA:

RATE ANALYSIS

UNIT :

225 Nos.**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	324.00000	4.22	1367.28
	Cement for incidentals @ 0.5 kg/slab	kg	112.50000	4.22	474.75
2	Coarse aggregate 10 mm below	cum	0.73440	1098.00	806.37
3	Fine aggregate (Un-Screened)	cum	0.46440	605.00	280.96
4	Super Plasticizer	kg	1.29600	63.00	81.65
5	Use rate of moulds for 250 uses	No.	225.00000	3.07	690.75
Total cost of Materials				Rs:	3701.76

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hand mixer 45 / 30 ltr	Hour	8.00000	5.69	45.52
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
2	5 hp pump (diesel)	Hour	0.10000	10.34	1.03
	Fuel / Energy charges	Hour	0.10000	133.95	13.40
3	Water tanker 8000 ltr	Hour	0.20000	448.93	89.79
	Fuel / Energy charges	Hour	0.20000	506.34	101.27
Total hire charges of Machinery				Rs:	251.01
Apportioned hire charges of machinery for lining slab			90%	Rs:	225.91

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Pump	Hour	0.10000	173.47	17.35
2	Crew for Water tanker	Hour	0.20000	273.98	54.80
3	Mason Class-I	Day	2.00000	710.00	1420.00
4	work Inspector	Day	1.00000	775.00	775.00
5	mazdoor				
	for batching / mixing / laying	Day	2.00000	595.00	1190.00
	for demoulding / cleaning / oiling	Day	2.00000	595.00	1190.00
	for shifting slabs to curing pond	Day	1.00000	595.00	595.00
	for stacking after curing	Day	1.00000	595.00	595.00
	for cleaning & miscellaneous	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	6432.15
Apportioned cost of labour for lining slabs			90%	Rs:	5788.94

labour component/unit qty

25.70

Add contractor's profit and overhead charges

13.615% 3.50

labour component/unit qty (including contractor's profit)

29.20**ABSTRACT:**

A. Cost of Materials

Rs: 3701.76

B. Hire charges of Machinery

Rs: 225.91

C. Cost of Labour

Rs: 5788.94

Total

Rs: 9716.61

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1322.92

Total cost for

225.00 Nos.

Rs: **11039.53****Rate per each**

(A+B+C+D)/225.0

Rs: **49.06**

IRR-CAW-7-43

Manufacturing 400 x 150 x 30 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N/sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plasticizer (0.4% by wt. of cement), CA : 0.68 cum, FA : 0.43cum)

DATA:

RATE ANALYSIS

UNIT :

25 Nos.**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	13.50000	4.22	56.97
	Cement for incidentals @ 0.3 kg/slab	kg	7.50000	4.22	31.65
2	Coarse aggregate 10 mm below	cum	0.03060	1098.00	33.60
3	Fine aggregate (Un-Screened)	cum	0.019350	605.00	11.71
4	Super Plasticizer	kg	0.05400	63.00	3.40
5	Use rate of moulds for 250 uses	No.	25.00000	1.63	40.75
Total cost of Materials				Rs:	178.08

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hand mixer 45 / 30 ltr	Hour	8.00000	5.69	45.52
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
2	5 hp pump (diesel)	Hour	0.10000	10.34	1.03
	Fuel / Energy charges	Hour	0.10000	133.95	13.40
3	Water tanker 8000 ltr	Hour	0.20000	448.93	89.79
	Fuel / Energy charges	Hour	0.20000	506.34	101.27
Total hire charges of Machinery				Rs:	251.01
Apportioned hire charges of machinery for lug slabs				10%	Rs: 25.10

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Pump	Hour	0.10000	173.47	17.35
2	Crew for Water tanker	Hour	0.20000	273.98	54.80
3	Mason Class-I	Day	2.00000	710.00	1420.00
4	work inspector	Day	1.00000	775.00	775.00
5	mazdoor				
	for batching / mixing / laying	Day	2.00000	595.00	1190.00
	for demoulding / cleaning / oiling	Day	2.00000	595.00	1190.00
	for shifting slabs to curing pond	Day	1.00000	595.00	595.00
	for stacking after curing	Day	1.00000	595.00	595.00
	for cleaning & miscellaneous	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	6432.15
Apportioned cost of labour for lug slabs				10%	Rs: 643.22

labour component/unit qty	25.70
Add contractor's profit and overhead charges	13.615% 3.50
labour component/unit qty (including contractor's profit)	29.20

ABSTRACT:

A. Cost of Materials	Rs:	178.08
B. Hire charges of Machinery	Rs:	25.10
C. Cost of Labour	Rs:	643.22
Total	Rs:	846.40
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 115.24
Total cost for	25.00 Nos.	Rs: 961.64
Rate per each	(A+B+C+D)/25.0	Rs: 38.47

IRR-CAW-7-44 Providing and laying uncoursed rubble stone masonry in CM 1 : 5 proportion for canal side lining using stones and chips from approved quarry including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Thickness of the masonry assumed: 0.3 m, rubble stones : 0.96 cum, Stone Chips : 0.15cum, Through Stones 20 x 20 x 30cm : 1/sqm)

DATA:

RATE ANALYSIS

UNIT : 10.00 cum

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement 43 Gr	kg	1152.00000	4.22	4861.44
2	Sand (Screened)	cum	4.00000	728.00	2912.00
3	Uncoursed rubble stones at quarry	cum	9.60000	395.00	3792.00
4	Through stones 20x20x30 cm	Nos	32.00000	29.00	928.00
5	Stone chips at quarry	cum	1.50000	466.00	699.00
Total cost of Materials				Rs:	13192.44

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	5 hp pump (diesel)	Hour	4.00000	10.34	41.36
	Fuel / Energy charges	Hour	4.00000	133.95	535.80
Total hire charges of Machinery				Rs:	577.16

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Operator pump	Hour	4.00000	173.47	693.88
2	work inspector	Day	1.00000	775.00	775.00
3	Mason Class I	Day	2.00000	710.00	1420.00
4	Mason Class II	Day	2.00000	640.00	1280.00
5	mazdoor	Day	8.00000	595.00	4760.00
6	Cartman with Double Bullock cart for water	Day	1.00000	710.00	710.00
Total cost of Labour				Rs:	9638.88

labour component/unit qty	963.90
Add contractor's profit and overhead charges	13.615% 131.20
labour component/unit qty (including contractor's profit)	1095.10

ABSTRACT:

A. Cost of Materials			Rs:	13192.44
B. Hire charges of Machinery			Rs:	577.16
C. Cost of Labour			Rs:	9638.88
		Total	Rs:	23408.48
D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	3187.06
Total cost for	10.00 cum		Rs:	26595.54
Rate per	cum	(A+B+C+D)/10.0	Rs.	2659.55

IRR-CAW-7-45 Providing and **laying uncoursed rubble stone masonry in CM 1:5** proportion for canal side
lining using stones from approved quarry including cost of all materials, machinery,
labour, forming weep holes at specified intervals, finishing, curing etc., complete
with initial lead upto 50m and all lifts.(without pin headers) : 1.1 cum
(Thickness of the Masonry assumed: 0.3 m , rubble stones

DATA: **RATE ANALYSIS** UNIT: **10** Cum

A. MATERIALS :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement 43 Gr	Kg	979.20000	4.22	4132.22
2	Sand (Screened)	Cum	3.40000	728.00	2475.20
3	Uncoursed rubble stones at quarry	Cum	11.00000	395.00	4345.00
Total Cost of Materials				Rs.	10952.42

B. MACHINERY :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hand Mixing Charges	Hour	8.00000	5.69	45.52
2	5 hp pump (diesel)	Hour	4.00000	10.34	41.36
	Fuel / Energy charges	Hour	5.00000	133.95	669.75
Total hire charges of Machinery				Rs.	756.63

C. LABOUR :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Operator pump	Hour	4.00000	173.47	693.88
2	Mason Class I	Day	13.00000	710.00	9230.00
3	Mason Class II	Day	6.00000	640.00	3840.00
4	Mazdoor	Day	29.00000	595.00	17255.00
5	Cartman with Double Bullock cart for water	Day	1.00000	710.00	710.00
Total Cost of Labour				Rs.	31728.88

labour component/unit qty	3172.90
Add contractor's profit and overhead charges	13.615% 432.00
labour component/unit qty (including contractor's profit)	3604.90

ABSTRACT :

A. Cost of Materials			Rs.	10952.42
B. Hire Charges of Machinery			Rs.	756.63
C. Cost of Labour			Rs.	31728.88
		Total	Rs:	43437.93
D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	5914.07
Total cost for	10.00 Cum		Rs:	49352.00
Rate per	Cum	(A+B+C+D)/10.0	Rs.	4935.20

IRR-CAW-7-46 Providing and **laying uncoursed rubble stone masonry in CM 1 : 5** proportion for canal side
lining using stones and chips from canal excavation including cost of all materials,
machinery, labour, forming weep holes at specified interval, finishing, curing etc., complete
with initial lead upto 50 m and all lifts.
(rubble stones : 0.96 cum, Stone Chips : 0.15cum, Through Stones 20 x 20 x 30cm : 1/sqm)

DATA: **RATE ANALYSIS** UNIT: **10.00** cum

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement 43 Gr	kg	1144.00000	4.22	4827.68
2	Sand (Screened)	cum	4.00000	728.00	2912.00
3	Uncoursed rubble at dump yard	cum	9.60000	204.00	1958.40
4	Through stones 20x20x30 cm	Nos	32.00000	29.00	928.00
5	Stone chips at dump yard	cum	1.50000	236.00	354.00
Total cost of Materials				Rs:	10980.08

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	5 hp pump (diesel)	Hour	4.00000	10.34	41.36
	Fuel / Energy charges	Hour	4.00000	133.95	535.80
Total hire charges of Machinery				Rs:	577.16

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Operator pump	Hour	4.00000	173.47	693.88
2	work inspector	Day	1.00000	775.00	775.00
3	Mason Class I	Day	2.00000	710.00	1420.00
4	Mason Class II	Day	2.00000	640.00	1280.00
5	Crowbarman	Day	1.00000	640.00	640.00
6	mazdoor	Day	9.00000	595.00	5355.00
7	Cartman with Double Bullock cart for water	Day	1.00000	710.00	710.00
Total cost of Labour				Rs:	10873.88

labour component/unit qty	1087.40
Add contractor's profit and overhead charges	13.615% 148.00
labour component/unit qty (including contractor's profit)	1235.40

ABSTRACT:

A. Cost of Materials	Rs:	10980.08
B. Hire charges of Machinery	Rs:	577.16
C. Cost of Labour	Rs:	10873.88
Total	Rs:	22431.12
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 3054
Total cost for	10.00 cum	Rs: 25485.12
Rate per cum	(A+B+C+D)/10.0	Rs: 2548.51

IRR-CAW-7-47 Providing and **laying uncoursed rubble stone masonry in CM 1:5 proportion for canal side lining** using stones from canal excavation including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete **with initial lead upto 50m and all lifts.**
(rubble stones : 1.1cum, cement : 98kg, sand 0.34 cum)

DATA:

RATE ANALYSISUNIT: **10** Cum**A. MATERIALS :**

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement 43 Gr	Kg	980.00000	4.22	4135.60
2	Sand (Screened)	Cum	3.40000	728.00	2475.20
3	Uncoursed rubble at dump yard	Cum	11.00000	204.00	2244.00
Total Cost of Materials				Rs.	8854.80

B. MACHINERY :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hand Mixing Charges	Hour	8.00000	5.69	45.52
2	5 hp pump (diesel)	Hour	4.00000	10.34	41.36
	Fuel / Energy charges	Hour	5.00000	133.95	669.75
Total hire charges of Machinery				Rs.	756.63

C. LABOUR :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Operator pump	Hour	4.00000	173.47	693.88
2	Mason Class I	Day	13.00000	710.00	9230.00
3	Mason Class II	Day	6.00000	640.00	3840.00
4	Mazdoor	Day	29.00000	595.00	17255.00
5	Cartman with double bullock cart	Day	1.00000	710.00	710.00
Total Cost of Labour				Rs.	31728.88

labour component/unit qty	3172.90
Add contractor's profit and overhead charges	13.615% 432.00
labour component/unit qty (including contractor's profit)	3604.90

ABSTRACT :

A. Cost of Materials	Rs.	8854.8
B. Hire Charges of Machinery	Rs.	756.63
C. Cost of Labour	Rs.	31728.88
Total	Rs:	41340.31
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs: 5628.48
Total cost for	10.00 Cum	Rs: 46968.79
Rate per Cum	(A+B+C+D)/10.0	Rs: 4696.88

IRR-CAW-8

ROCK PITCHING:

IRR-CAW-8-1

Providing and constructing 25 cm thick dry rubble stone pitching with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.
(rubble stones : 0.23 cum/sqm, Stone Chips : 0.0375cum/sqm, Pin Headers 30cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Uncoursed rubble stones at quarry	cum	23.00000	395.00	9085.00
2	Pin header (Through stone) 30 cm	Nos	200.00000	29.00	5800.00
3	Stone chips at quarry	cum	3.75000	466.00	1747.50
Total cost of Materials				Rs:	16632.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class II	Day	5.00000	640.00	3200.00
3	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	7545.00

labour component/unit qty

75.50

Add contractor's profit and overhead charges

13.615% 10.30

labour component/unit qty (including contractor's profit)

85.80**ABSTRACT:**

A. Cost of Materials

Rs: 16632.50

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 7545.00

Total

Rs: **24177.50**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 3291.77

Total cost for

100.00 sqm

Rs: **27469.27****Rate per sqm**

(A+B+C+D)/100.0

Rs. **274.69**

Note: If 15 cm thick murum bed is to be provided below pitching
(Murum : 0.18 cum/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Murum	cum	18.00000	250.00	4500.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	4500.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	2380.00

labour component/unit qty

23.80

Add contractor's profit and overhead charges

13.615% 3.20

labour component/unit qty (including contractor's profit)

27.00**ABSTRACT:**

A. Cost of Materials

Rs: 4500.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 2380.00

Total

Rs: **6880.00**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 936.71

Total cost for

100.00 sqm

Rs: **7816.71****Rate per sqm**

(A+B+C+D)/100.0

Rs. **78.17**

IRR-CAW-8-1-A Providing and **constructing 22.5 cm thick dry rubble stone pitching with pin headers at 2 per**
(New Item4 - 2011-12) **sqm** including cost of all materials, labour, hand packing, finishing etc., complete with initial
lead upto 50 m and all lifts.
(rubble stones : 0.207 cum/sqm, Stone Chips : 0.03375cum/sqm, Pin Headers 30cm : 2/sqm)
(For Maintenance works)

DATA:

RATE ANALYSIS

UNIT : 100.00 sqm

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Uncoursed rubble stones at quarry	cum	20.70000	395.00	8176.50
2	Pin header (Through stone) 30 cm	Nos	200.00000	29.00	5800.00
3	Stone chips at quarry	cum	3.37500	466.00	1572.75
Total cost of Materials				Rs:	15549.25

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class II	Day	5.00000	640.00	3200.00
3	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	7545.00

labour component/unit qty

75.50

Add contractor's profit and overhead charges

13.615% 10.30

labour component/unit qty (including contractor's profit)

85.80

ABSTRACT:

A. Cost of Materials

Rs: 15549.25

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 7545.00

Total

Rs: 23094.25

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 3144.28

Total cost for

100.00 sqm

Rs: **26238.53**

Rate per sqm

(A+B+C+D)/100.0

Rs. **262.39**

IRR-CAW-8-2 Providing and **constructing 25 cm thick dry rubble stone pitching** including cost of all materials, labour,
hand packing, finishing etc., complete
(rubble stones : 0.275 cum/sqm)

DATA:

RATE ANALYSIS

UNIT: 100 Sqm.

A. MATERIALS :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Uncoursed rubble stones at quarry	Cum	27.50000	395.00	10862.50
Total Cost of Materials				Rs.	10862.50

B. MACHINERY :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs.	0.00

C. LABOUR :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Class II	Day	5.50000	640.00	3520.00
2	Mazdoor	Day	24.75000	595.00	14726.25
Total Cost of Labour				Rs.	18246.25

labour component/unit qty

182.50

Add contractor's profit and overhead charges

13.615% 24.80

labour component/unit qty (including contractor's profit)

207.30

ABSTRACT :

A. Cost of Materials		Rs.	10862.5
B. Hire Charges of Machinery		Rs.	0
C. Cost of Labour		Rs.	18246.25
	Total	Rs:	29108.75
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	3963.16
Total cost for	100.00 Sqm.	Rs:	33071.91
Rate per Sqm.	(A+B+C+D)/100.0	Rs.	330.72
NOTE:	If 15 cm thick murum bed is to be provided below pitching add in Rs. 78.17 (As per rate analysis under item IRR-CAW-8-1- Note)		

IRR-CAW-8-2-A Providing and **constructing 225 mm thick dry rubble stone pitching** including cost of all materials, labour,
(New Item5 - 2011-12) hand packing, finishing etc., complete
(rubble stones : 0.2475 cum/sqm) (For Maintenance Works)

DATA	Requirement of materials for constructing 100 Sqm pitching : Uncoursed rubble stones : 24.75 cum Requirement of labour for 100 sqm pitching: Mason Cl II for laying pitching : 0.20 per cum Mazdoor : 0.90 per cum

DATA: **RATE ANALYSIS** UNIT: **100** Sqm.

A. MATERIALS :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rough Stone for Revetment	Cum	24.75000	191.00	4727.25
2	Stone Chips at Quarry	Cum	3.40000	466.00	1584.40
Total Cost of Materials .				Rs.	6311.65

B. MACHINERY :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs.	0.00

C. LABOUR :

Sl. No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Class II	Day	4.95000	640.00	3168.00
2	Mazdoor	Day	22.27500	595.00	13253.63
Total Cost of Labour				Rs.	16421.63

labour component/unit qty 164.20
Add contractor's profit and overhead charges 13.615% 22.40
labour component/unit qty (including contractor's profit) **186.60**

ABSTRACT :

A. Cost of Materials		Rs.	6311.65
B. Hire Charges of Machinery		Rs.	0
C. Cost of Labour		Rs.	16421.63
	Total	Rs:	22733.28
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	3095.14
Total cost for	100.00 Sqm.	Rs:	25828.42
Rate per Sqm.	(A+B+C+D)/100.0	Rs.	258.28

IRR-CAW-8-3 Providing and **constructing 30 cm thick dry rubble stone pitching with pin headers at 2 per sqm** including cost of all materials, labour, hand packing, finishing etc., complete with initial **lead upto 50 m and all lifts.**
(rubble stones : 0.275 cum/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)

DATA: **RATE ANALYSIS** UNIT: **100.00** sqm

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Uncoursed rubble stones at quarry	cum	27.50000	395.00	10862.50
2	Pin header (Through stone) 30 cm	Nos	200.00000	29.00	5800.00
3	Stone chips at quarry	cum	4.50000	466.00	2097.00
Total cost of Materials				Rs:	18759.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class II	Day	5.00000	640.00	3200.00
3	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	7545.00

labour component/unit qty		75.50
Add contractor's profit and overhead charges	13.615%	10.30
labour component/unit qty (including contractor's profit)		<u>85.80</u>

ABSTRACT:

A. Cost of Materials			Rs:	18759.50
B. Hire charges of Machinery			Rs:	0.00
C. Cost of Labour			Rs:	<u>7545.00</u>
		Total	Rs:	<u>26304.50</u>

D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	3581.36
Total cost for	100.00 sqm		Rs:	29885.86
Rate per sqm	(A+B+C+D)/100.0		Rs:	298.86
NOTE:	If 15 cm thick murum bed is to be provided below pitching add (As per rate analysis under item IRR-CAW-8-1- Note)			Rs. 78.17

IRR-CAW-8-4 Providing and **Constructing 30 cm thick dry rubble stone pitching** including cost of all materials,labour,hand packing,finishing etc.,complete
(rubble stones : 0.33 cum/sqm)

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS :**

Sl No	Particulars	Unit	Quantity	Rate	in Rs	Amount in Rs
1	Uncoursed rubble stones at Quarry	Cum	33.00000		395.00	13035.00
(Included in material Rate)						
Total Cost of materials Rs :						13035.00

B.MACHINERY :

Sl No	Description	Unit	Quantity	Rate	in Rs	Amount in Rs
1	Nil		0.00000		0.00	0.00
			0.00000		0.00	0.00
Total hire charges of machinery Rs :						0.00

C.LABOUR :

Sl No	Description	Unit	Quantity	Rate	in Rs	Amount in Rs
1	Mason Class II	Day	6.60000		640.00	4224.00
2	Mazdoor	Day	29.70000		595.00	17671.50
Total cost of labour Rs :						21895.50

labour component/unit qty		219.00
Add contractor's profit and overhead charges	13.615%	29.80
labour component/unit qty (including contractor's profit)		<u>248.80</u>

ABSTRACT

A. Cost of Materials including ryalty charges			Rs:	13035.00
B. Hire charges of Machinery			Rs:	0.00
C. Cost of Labour			Rs:	<u>21895.50</u>
		Total	Rs:	<u>34930.50</u>

D. Add for contractor's profit and overheads on (A+B+C)		13.615%	Rs:	4755.79
Total cost for	100.00 sqm		Rs:	39686.29
Rate per sqm	(A+B+C+D)/100.0		Rs:	396.86
NOTE:	If 15 cm thick murum bed is to be provided below pitching Add (As per rate analysis under item IRR-CAW-8-1 - Note)			Rs : 78.17

IRR-CAW-8-5 Providing and **constructing 45 cm thick dry rubble stone pitching with pin headers at 2 per sqm** including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.
(rubble stones : 0.40 cum/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Uncoursed rubble stones at quarry	cum	40.00000	395.00	15800.00
2	Pin header (Through stone) 45 cm	Nos	200.00000	50.00	10000.00
3	Stone chips at quarry	cum	6.75000	466.00	3145.50
Total cost of Materials				Rs:	28945.50

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class II	Day	7.00000	640.00	4480.00
3	mazdoor	Day	9.00000	595.00	5355.00
Total cost of Labour				Rs:	10610.00

labour component/unit qty

106.10

Add contractor's profit and overhead charges

13.615% 14.40

labour component/unit qty (including contractor's profit)

120.50**ABSTRACT:**

A. Cost of Materials

Rs: 28945.50

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 10610.00

Total

Rs: 39555.50

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 5385.48

Total cost for

100.00 sqm

Rs: **44940.98****Rate per****sqm**

(A+B+C+D)/100.0

Rs: **449.41**

NOTE:

If 15 cm thick murum bed is to be provided below pitching add
(As per rate analysis under item IRR-CAW-8-1 - Note)

Rs: **78.17**

IRR-CAW-8-6

Providing and **Constructing 45 cm thick dry rubble stone pitching**

including cost of all materials,labour,hand packing,finishing etc.,complete

(rubble stones : 0.495 cum/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS :**

SI No	Particulars	Unit	Quantity	Rate in Rs	Amount in Rs
1	Uncoursed rubble stones at Quarry (Included in material Rate)	Cum	49.50000	395.00	19552.50
Total Cost of materials				Rs :	19552.50

B.MACHINERY :

SI No	Description	Unit	Quantity	Rate in Rs	Amount in Rs
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of machinery				Rs :	0.00

C.LABOUR :

SI No	Description	Unit	Quantity	Rate in Rs	Amount in Rs
1	Mason Class II	Day	9.90000	640.00	6336.00
2	Mazdoor	Day	44.55000	595.00	26507.25
Total cost of labour				Rs :	32843.25

labour component/unit qty

328.40

Add contractor's profit and overhead charges

13.615% 44.70

labour component/unit qty (including contractor's profit)

373.10

ABSTRACT

A. Cost of Materials including ryolty charges
 B. Hire charges of Machinery
 C. Cost of Labour

Rs: 19552.50
 Rs: 0.00
 Rs: 32843.25
 Rs: 52395.75

D. Add for contractor's profit and overheads on (A+B+C) 13.615%
 Total cost for 100.00 sqm

Rs: 7133.68
 Rs: **59529.43**
 Rs: **595.29**

Rate per sqm (A+B+C+D)/100.0

NOTE: If 15 cm thick murum bed is to be provided below pitching

Rs : **78.17**

Add (As per rate analysis under item IRR-CAW-8-1 - Note)

IRR-CAW-8-7 Providing and **constructing 30 cm thick rubble stone pitching** set in **CM 1: 5** proportion with **pin headers at 2 per sqm** in including cost of all materials, labour, packing chips and mortar, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(rubble stones : 0.275 cum/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Uncoursed rubble stones at quarry	cum	27.50000	395.00	10862.50
2	Pin header (Through stone) 30 cm	Nos	200.00000	29.00	5800.00
3	Stone chips @ 15 % at quarry	cum	4.50000	466.00	2097.00
4	Cement	kg	3000.00000	4.22	12660.00
5	Sand (Screened)	cum	10.50000	728.00	7644.00
Total cost of Materials				Rs:	39063.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	5 hp pump (diesel)	Hour	2.00000	10.34	20.68
	Fuel / Energy charges	Hour	2.00000	133.95	267.90
Total hire charges of Machinery				Rs:	288.58

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Pump	Hour	2.00000	173.47	346.94
2	work inspector	Day	1.00000	775.00	775.00
3	Mason Class II	Day	5.00000	640.00	3200.00
4	mazdoor	Day	12.00000	595.00	7140.00
5	Catman with double bullock cart	Day	2.00000	710.00	1420.00
Total cost of Labour				Rs:	12881.94

labour component/unit qty

128.80

Add contractor's profit and overhead charges

13.615% 17.50

labour component/unit qty (including contractor's profit)

146.30**ABSTRACT:**

A. Cost of Materials
 B. Hire charges of Machinery
 C. Cost of Labour

Rs: 39063.50
 Rs: 288.58
 Rs: 12881.94
 Rs: 52234.02

D. Add for contractor's profit and overheads on (A+B+C) 13.615%
 Total cost for 100.00 sqm

Rs: 7111.66
 Rs: **59345.68**
 Rs: **593.46**

Rate per sqm (A+B+C+D)/100.0

NOTE: If 15 cm thick murum bed is to be provided below pitching add

Rs. **78.17**

(As per rate analysis under item IRR-CAW-8-1 - Note)

IRR-CAW-8-8 Providing and **Constructing 30 cm thick rubble stone pitching** set in **CM 1:5** Proportion including cost of all materials,labour, packing chips and mortar ,finishing etc.,complete **(rubble stones : 0.33 cum/sqm)**

DATA:

RATE ANALYSISUNIT : **100.00 Sqm****A. MATERIALS :**

Sl No	Particulars	Unit	Quantity	Rate in Rs	Amount in Rs
1	Uncoursed rubble stones at Quarry	Cum	33.00000	395.00	13035.00
2	Cement	Kg	3232.00000	4.22	13639.04
3	Sand (Screened)	Cum	11.22000	728.00	8168.16
Total Cost of materials				Rs :	34842.20

B.MACHINERY :

Sl No	Description	Unit	Quantity	Rate in Rs	Amount in Rs
1	Nil		0.00000	0.00	0.00
Total hire charges of machinery				Rs :	0.00

C.LABOUR :

Sl No	Description	Unit	Quantity	Rate in Rs	Amount in Rs
1	Mason Class I	Day	0.54000	710.00	383.40
2	Mason Class II	Day	1.26000	640.00	806.40
3	Mazdoor	Day	2.80000	595.00	1666.00
Total cost of labour				Rs :	2855.80

labour component/unit qty	28.60
Add contractor's profit and overhead charges	13.615% 3.90
labour component/unit qty (including contractor's profit)	32.50

ABSTRACT

A. Cost of Materials	Rs:	34842.20
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	2855.80
Total	Rs:	37698.00

D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	5132.58
Total cost for	100.00 Sqm	Rs:	42830.58
Rate per Sqm	(A+B+C+D)/100.0	Rs:	428.31

NOTE:	If 15 cm thick murum bed is to be provided below pitching	Rs.	78.17
	Add (As per rate analysis under item IRR-CAW-8-1 - Note)		

IRR-CAW-8-9 Providing and constructing 30 cm thick dry khandki stone pitching using 20 to 25 cm size khandki stones with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.
(Khandki stones 20- 25 cm height : 1200 Nos/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Khandki stones 20-25 cm height	Nos	1200.00000	22.00	26400.00
2	Pin header (Through stone) 30 cm	Nos	200.00000	29.00	5800.00
3	Stone chips	cum	4.50000	466.00	2097.00
Total cost of Materials				Rs:	34297.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class II	Day	5.00000	640.00	3200.00
3	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	7545.00

labour component/unit qty	75.50
Add contractor's profit and overhead charges	13.615% 10.30
labour component/unit qty (including contractor's profit)	85.80

ABSTRACT:

A. Cost of Materials	Rs:	34297.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	7545.00
Total	Rs:	41842.00

D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	5696.79
Total cost for	100.00 sqm	Rs:	47538.79
Rate per sqm	(A+B+C+D)/100.0	Rs:	475.39

NOTE:	If 15 cm thick murum bed is to be provided below pitching add	Rs.	78.17
	(As per rate analysis under item IRR-CAW-8-1 - Note)		

IRR-CAW-8-10 Providing and constructing 45 cm thick dry khandki stone pitching using 25 to 30 cm size khandki stones with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.
(Khandki stones 25- 30 cm height : 1200 Nos/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Khandki stones 25-30 cm height	Nos	730.00000	23.00	16790.00
2	Pin headers 45 cm	Nos	200.00000	50.00	10000.00
3	Stone chips	cum	6.75000	466.00	3145.50
Total cost of Materials				Rs:	29935.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class II	Day	7.00000	640.00	4480.00
3	mazdoor	Day	9.00000	595.00	5355.00
Total cost of Labour				Rs:	10610.00

labour component/unit qty

106.10

Add contractor's profit and overhead charges

13.615% 14.40

labour component/unit qty (including contractor's profit)

120.50

ABSTRACT:

A. Cost of Materials

Rs: 29935.50

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 10610.00

Total

Rs: 40545.50

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 5520.27

Total cost for

100.00 sqm

Rs: 46065.77

Rate per sqm

(A+B+C+D)/100.0

Rs. 460.66

NOTE:

If 15 cm thick murum bed is to be provided below pitching add
(As per rate analysis under item IRR-CAW-8-1 - Note)

Rs. 78.17

IRR-CAW-8-11 Providing and constructing 30 cm thick khandki stone pitching using 20 to 25 cm size khandki stones with pin headers at 2 per sqm set in CM 1 : 5 proportion with pointing joints in CM 1:3 proportion including cost of all materials, labour, packing chips and mortar, finishing, curing etc.complete with initial lead upto 50 m and all lifts.
(Khandki stones 20- 25 cm height : 1200 Nos/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Khandki stones 20-25 cm height	Nos	1200.00000	22.00	26400.00
2	Pin headers 30 cm long	Nos	200.00000	29.00	5800.00
3	Stone chips @ 15 % at quarry	cum	4.50000	466.00	2097.00
4	Cement	kq	2902.00000	4.22	12246.44
5	Sand (Screened)	cum	9.67000	728.00	7039.76
Total cost of Materials				Rs:	53583.20

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	5 hp diesel pump	Hour	2.00000	10.34	20.68
	Fuel / Energy charges	Hour	2.00000	133.95	267.90
Total hire charges of Machinery				Rs:	288.58

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Pump	Hour	2.00000	173.47	346.94
2	work inspector	Day	1.00000	775.00	775.00
3	Cartman with double bullock cart	Day	2.00000	710.00	1420.00
4	Mason Class II	Day	5.00000	640.00	3200.00
5	mazdoor	Day	11.00000	595.00	6545.00
Total cost of Labour				Rs:	12286.94

labour component/unit qty

122.90

Add contractor's profit and overhead charges

13.615% 16.70

labour component/unit qty (including contractor's profit)

139.60

ABSTRACT:

A. Cost of Materials			Rs:	53583.20
B. Hire charges of Machinery			Rs:	288.58
C. Cost of Labour			Rs:	12286.94
		Total	Rs:	66158.72

D. Add for contractor's profit and overheads on (A+B+C)	13.615%		Rs:	9007.51
Total cost for	100.00 sqm		Rs:	75166.23
Rate per sqm	(A+B+C+D)/100.0		Rs:	751.66

NOTE:	If 15 cm thick murum bed is to be provided below pitching add (As per rate analysis under item IRR-CAW-8-1 - Note)	Rs.	78.17

IRR-CAW-8-12 Providing and constructing 45 cm thick khandki stone pitching using 25 to 30 cm stones with pin headers at 2 per sqm set in CM 1 : 5 proportion with pointing joints in CM 1 : 3 proportion including cost of all materials, labour, packing chips and mortar, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Khandki stones 25- 30 cm height : 730 Nos/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm)

DATA: RATE ANALYSIS UNIT : 100.00 sqm

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Khandki stones 25-30 cm height	Nos	730.00000	23.00	16790.00
2	Pin headers 45 cm	Nos	200.00000	50.00	10000.00
3	Stone chips @ 15 % at quarry	cum	6.75000	466.00	3145.50
4	Cement	kg	4050.00000	4.22	17091.00
5	Sand (Screened)	cum	13.99000	728.00	10184.72
Total cost of Materials				Rs:	57211.22

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	5 hp diesel pump	Hour	4.00000	10.34	41.36
	Fuel / Energy charges	Hour	4.00000	133.95	535.80
Total hire charges of Machinery				Rs:	577.16

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Pump	Hour	4.00000	173.47	693.88
2	work inspector	Day	1.00000	775.00	775.00
3	Cartman with double bullock cart	Day	2.00000	710.00	1420.00
4	Mason Class II	Day	7.00000	640.00	4480.00
5	mazdoor	Day	16.00000	595.00	9520.00
Total cost of Labour				Rs:	16888.88

labour component/unit qty	168.90
Add contractor's profit and overhead charges	13.615% 23.00
labour component/unit qty (including contractor's profit)	191.90

ABSTRACT:

A. Cost of Materials			Rs:	57211.22
B. Hire charges of Machinery			Rs:	577.16
C. Cost of Labour			Rs:	16888.88
		Total	Rs:	74677.26

D. Add for contractor's profit and overheads on (A+B+C)	13.615%		Rs:	10167.31
Total cost for	100.00 sqm		Rs:	84844.57
Rate per sqm	(A+B+C+D)/100.0		Rs:	848.45

NOTE:	If 15 cm thick murum bed is to be provided below pitching add (As per rate analysis under item IRR-CAW-8-1 - Note)	Rs.	78.17

IRR-CAW-8-13 Providing 10 cm thick approved type grass turfing to the side slopes of canal including cost of all materials, labour, watering for minimum 15 days etc.,complete with lead 50 m and all lifts.
(FA : 2 cum/sqm)

DATA: RATE ANALYSIS UNIT : 100.00 sqm

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Turfing sods	sqm	100.00000	26.00	2600.00
2	Sand for filling	cum	2.00000	460.00	920.00
Total cost of Materials				Rs:	3520.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.10000	775.00	77.50
2	Cartman with double bullock cart	Day	2.00000	710.00	1420.00
3	mazdoor	Day	14.00000	595.00	8330.00
Total cost of Labour				Rs:	9827.50

labour component/unit qty 98.30
 Add contractor's profit and overhead charges 13.615% 13.40
 labour component/unit qty (including contractor's profit) **111.70**

ABSTRACT:

A. Cost of Materials		Rs:	3520.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	9827.50
	Total	Rs:	13347.50
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	1817.26
Total cost for	100.00 sqm	Rs:	15164.76
Rate per sqm	(A+B+C+D)/100.0	Rs.	151.65

IRR-CAW-8-14 **Providing 10 cm Thick approved type gross turfing** to the side slopes of canal including cost of all materials, labour, watering for minimum 15 days etc., complete.
with initial lead upto 50 m and all lifts (WITHOUT USING SAND)

DATA:

RATE ANALYSISUNIT : **100.00 Sqm****A. MATERIALS :**

SI No	Particulars	Unit	Quantity	Rate in Rs	Amount in Rs
1	Turfing Sods	Sqm	100.00000	26.00	2600.00
Total Cost of materials				Rs :	2600.00

B.MACHINERY :

SI No	Description	Unit	Quantity	Rate in Rs	Amount in Rs
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of machinery				Rs :	0.00

C.LABOUR :

SI No	Description	Unit	Quantity	Rate in Rs	Amount in Rs
1	Mazdoor	Day	7.00000	595.00	4165.00
2	Cart men with double bullock cart	Day	2.00000	710.00	1420.00
Total cost of labour				Rs	5585.00

labour component/unit qty 55.90
 Add contractor's profit and overhead charges 13.615% 7.60
 labour component/unit qty (including contractor's profit) **63.50**

ABSTRACT

A. Cost of Materials including ryolto charges		Rs:	2600.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	5585.00
	Total	Rs:	8185.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	1114.39
Total cost for	100.00 Sqm	Rs:	9299.39
Rate per Sqm	(A+B+C+D)/100.0	Rs.	92.99

CHAPTER - IV

CANAL CROSS DRAINAGE WORKS - Standard Data

(WILL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY / AS NEEDED)

FOR THE YEAR : 2024-25

Index- code
IRR-CCDW

CANAL CROSS DRAINAGE WORKS - DATA RATES

Directions to add Seigniorage Charges and Additional Lead Charges

Seigniorage Charges:

1. The unit rate for work item in the Standard Data is **exclusive of Seigniorage Charges** wherever applicable.
2. The appropriate Seigniorage Charges for relevant materials are to be added in the Part-B of the estimate

Additional Lead and Lift Charges:

1. Unless otherwise specified the basic rates are inclusive of all lifts.
2. For concrete, masonry and reinforcement items **wherever** initial lead of 1km is considered in the basic rate, the additional lead as follows:
Additional lead charges for Steel, sand, coarse aggregate, stones and stone chips shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.
In case of Cement and Steel, Loading and unloading charges are already added in the work item while arriving the unit rate and hence should not be added again

Example:

Total lead for sand from approved sand quarry :	15 Km
Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) :	1 Km
Additional lead charges :	Lead charges for : Rs. 115.13
	Lead charges for next 10 km Rs. 172.6948
	Total lead charges for 15 km Rs. 287.82
	Less 1 km initial lead charge: Rs. 43.17 (-)
	Net additional lead charges / Rs. 244.65

3. The Leads for Steel shall be from the nearest market place to the Project area
4. For earth/rockfill embankments **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:

Additional lead charges for Earth, Murrum etc., shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.
(same as above)

Example:

Total lead for earth from approved borrow area :	15 Km
Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) :	1 Km
Additional lead charges :	Lead charges for : Rs. 115.13
	Lead charges for next 10 km Rs. 172.6948
	Total lead charges for 15 km Rs. 287.82
	Less 1 km initial lead charge: Rs. 43.17 (-)
	Net additional lead charges / Rs. 244.65

5. The initial lead up to 50 m as mentioned in some standard data items is meant for manual lead within the working area. For conveyance of materials, the lead required from quarry/Borrow area/ Dump Area to worksite shall be added to the data without deducting the 50 m initial lead charges

CCDW - Work Items

IRR-CCDW-1 EXCAVATION & FOUNDATION TREATMENT WORKS :

IRR-CCDW-1-1 Excavation in all kinds of soil including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.25000	775.00	193.75
2	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	3763.75

labour component/unit qty 376.40

Add contractor's profit and overhead charges 13.615% 51.20

labour component/unit qty (including contractor's profit) **427.60****ABSTRACT:**

A. Cost of Materials Rs: 0.00

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 3763.75

Total Rs: 3763.75

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 512.43

Total cost for 10.00 cum Rs: **4276.18****Rate per cum** (A+B+C+D)/10.0 Rs: **427.62**

IRR-CCDW-1-2

Excavation for Structures- Mechanical Means**(Data adopted from MORTH)**

Earth work in excavation **in all kinds of soils** of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material.

Depth upto 3 m

Unit = cum

Taking output = 240 cum

Unit 240.00 cum**A. Materials:**

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
	NIL		0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. Machinery:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hydraulic excavator 1.0 cum bucket capacity	hour	6.00000	1751.36	10508.16
	Fuel/ Energy charges	hour	6.00000	1473.48	8840.88
Total hire charges of Machinery				Rs:	19349.04

C. Labour:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	day	0.32000	775.00	248.00
2	Mazdoor	day	8.00000	595.00	4760.00
3	crew for excavator	hour	6.00000	369.20	2215.20
Total cost of Labour				Rs:	7223.20

labour component/unit qty 30.10

Add contractor's profit and overhead charges 13.615% 4.10

labour component/unit qty (including contractor's profit) **34.20**

Abstract

a) Material		Rs	0.00
b) Machinery		Rs	19349.04
c) Labour		Rs	7223.20
Total		Rs	26572.24
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	3617.81
Total cost for	240.00 cum	Rs:	30190.05
Rate per cum	(A+B+C+D)/240.0	Rs.	125.79

IRR-CCDW-1-3 Excavation in **ordinary rock (including HDR) without blasting** including boulders **above 0.3 m upto 0.60 m dia.** for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., **complete with initial lead upto 50 m and initial lift upto 3 m.**

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crowbarman	Day	1.25000	640.00	800.00
2	Stone breaker	Day	1.25000	640.00	800.00
3	work inspector	Day	0.25000	775.00	193.75
4	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	5363.75

labour component/unit qty 536.40

Add contractor's profit and overhead charges 13.615% 73.00

labour component/unit qty (including contractor's profit) **609.40****ABSTRACT:**

A. Cost of Materials		Rs:	0.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	5363.75
Total		Rs:	5363.75
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	730.27
Total cost for	10.00 cum	Rs:	6094.02
Rate per cum	(A+B+C+D)/10.0	Rs.	609.40

IRR-CCDW-1-4 Excavation in **ordinary rock without blasting** for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial **lead upto 50 m and initial lift upto 3 m.**

DATA:

Taking output = 180 cum

Unit: **180.00 cum****A. Materials:**

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. Machinery:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hydraulic excavator 1.0 cum bucket capacity	hour	6.00000	1751.36	10508.16
	Fuel/ Energy charges	hour	6.00000	1473.48	8840.88
Total hire charges of Machinery				Rs:	19349.04

C. Labour:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	day	0.24000	775.00	186.00
2	Mazdoor	day	6.00000	595.00	3570.00
3	crew for excavator	hour	6.00000	369.20	2215.20
Total cost of Labour				Rs:	5971.20

labour component/unit qty	33.20
Add contractor's profit and overhead charges	13.615% 4.50
labour component/unit qty (including contractor's profit)	37.70

Abstract

a) Material		Rs	0.00
b) Machinery		Rs	19349.04
c) Labour		Rs	5971.20
Total		Rs	25320.24
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	3447.35
Total cost for	180.00 cum	Rs:	28767.59
Rate per cum	(A+B+C+D)/180.0	Rs.	159.82

IRR-CCDW-1-5 Excavation in hard rock requiring blasting including boulders above 0.6 m upto 1.2 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.

DATA:

RATE ANALYSIS

UNIT : 100 cum

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of drill rod 1.6 m length	Rm	43.50000	23.37	1016.60
	Reconditioning charges @	10%			101.66
2	Use rate of air hose 2 Nos.	Hour	6.00000	12.19	73.14
3	Explosive small dia (Kelvex-220)	kg	20.00000	73.00	1460.00
4	Electric detonators	Nos	29.00000	12.00	348.00
5	Detonating fuse coil	Rm	70.00000	11.00	770.00
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	3789.90

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Air compressor 8.5 cmm (diesel)	Hour	3.00000	280.01	840.03
	Fuel / Energy charges	Hour	3.00000	1506.96	4520.88
2	Jack hammers 2 Nos.	Hour	6.00000	19.11	114.66
	Fuel / Energy charges	Hour	6.00000	0.00	0.00
Total hire charges of Machinery				Rs:	5475.57

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Air compressor	Hour	3.00000	333.22	999.66
2	Crew for Jack hammer	Hour	6.00000	520.65	3123.90
3	work inspector	Day	1.00000	775.00	775.00
4	Blaster	Day	0.50000	780.00	390.00
5	Helper blaster	Day	0.50000	640.00	320.00
6	Crowbarman	Day	6.00000	640.00	3840.00
7	Stone breaker	Day	3.00000	640.00	1920.00
8	mazdoor	Day	51.00000	595.00	30345.00
Total cost of Labour				Rs:	41713.56

labour component/unit qty	417.10
Add contractor's profit and overhead charges	13.615% 56.80
labour component/unit qty (including contractor's profit)	473.90

ABSTRACT:

A. Cost of Materials		Rs:	3789.90
B. Hire charges of Machinery		Rs:	5475.57
C. Cost of Labour		Rs:	41713.56
		Total	Rs: 50979.03
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	6940.79
Total cost for	100.00 cum	Rs:	57919.82
Rate per cum	(A+B+C+D)/100.0	Rs.	579.20

IRR-CCDW-1-6 Excavation in **hard rock of all toughness by blasting** including boulders **above 1.2 m dia.** for foundations of canal cross drainage and other appurtenant structures and placing the excavated rock neatly in specified dump area or stack yard as directed etc., complete with **initial lead upto 50 m and initial lift upto 3 m.**

DATA:

RATE ANALYSISUNIT : **100.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Explosive small dia (Kelvex-220)	kg	32.00000	73.00	2336.00
2	Ordinary detonator	No.	8.00000	9.00	72.00
3	Electric detonator	No.	104.00000	12.00	1248.00
4	Detonating fuse coil	Rm	150.00000	11.00	1650.00
5	Use rate of air hose 2 Nos.	Hour	16.00000	12.19	195.04
6	Use rate of drill rod	Rm	98.30000	31.16	3063.03
	Reconditioning charges @	10%			306.30
Total cost of Materials				Rs:	8870.37

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Air compressor 8.5 cmm (diesel)	Hour	8.00000	280.01	2240.08
	Fuel / Energy charges	Hour	8.00000	1506.96	12055.68
2	Jack hammer 2 Nos	Hour	16.00000	19.11	305.76
	Fuel / Energy charges	Hour	16.00000	0.00	0.00
Total hire charges of Machinery				Rs:	14601.52

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Air compressor	Hour	8.00000	333.22	2665.76
2	Crew for Jack hammer	Hour	16.00000	520.65	8330.40
3	Blaster licensed	Day	1.00000	780.00	780.00
4	Helper blasting	Day	1.00000	640.00	640.00
5	work inspector	Day	1.00000	775.00	775.00
6	Crowbarman	Day	6.00000	640.00	3840.00
7	Stone breaker	Day	6.00000	640.00	3840.00
8	mazdoor	Day	51.00000	595.00	30345.00
Total cost of Labour				Rs:	51216.16

labour component/unit qty	512.20
Add contractor's profit and overhead charges	13.615% 69.70
labour component/unit qty (including contractor's profit)	581.90

ABSTRACT:

A. Cost of Materials		Rs:	8870.37
B. Hire charges of Machinery		Rs:	14601.52
C. Cost of Labour		Rs:	51216.16
		Total	Rs: 74688.05
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	10168.78
Total cost for	100.00 cum	Rs:	84856.83
Rate per cum	(A+B+C+D)/100.0	Rs.	848.57

IRR-CCDW-1-7 Excavation in **hard rock with blasting prohibited** for foundations of canal cross drainage and other appurtenant structures and placing the excavated rock neatly in or stack yard as directed etc., complete with specified dump area **initial lead upto 50 m and initial lift upto 3 m.**
Hard Rock (blasting prohibited) (Data adopted from MORTH)
Unit = cum

DATA:

Taking output = 10 cum	
Mechanical Means	10.00 cum

A.Materials:

SI No	Description	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
	NIL		0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

b) Machinery

SI No	Description	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Air Compressor 250 cft with 2 leads of pneumatic breaker	hour	6.00000	237.70	1426.20
	Fuel/ Energy charges	hour	6.00000	1205.58	7233.48
Total hire charges of Machinery				Rs:	8659.68

c) Labour

SI No	Description	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	work inspector	day	0.20000	775.00	155.00
2	Mazdoor	day	5.00000	595.00	2975.00
3	crew for compressor	hour	6.00000	333.22	1999.32
Total cost of Labour				Rs:	5129.32

labour component/unit qty 512.90

Add contractor's profit and overhead charges 13.615% 69.80

labour component/unit qty (including contractor's profit) **582.70****Abstract**

a) Material	Rs	0.00
b) Machinery	Rs	8659.68
c) Labour	Rs	5129.32
Total	Rs	13789.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1877.37
Total cost for	10.00 cum	Rs: 15666.37
Rate per cum	(A+B+C+D)/10.0	Rs. 1566.64

IRR-CCDW-1-8 Providing and fixing **25 mm dia 2.50 m long cold twisted deformed steel anchor rods** with 1.25 m length driven into 32 mm dia hole drilled in bed rock and remaining length embedded in concrete / masonry including cost of all materials, machinery, labour, drilling and cleaning hole, driving anchor rod, grouting hole with thick cement slurry etc., complete with initial lead **upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **10.00 Nos.****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Cement for grouting	kg	5.00000	4.22	21.10
2	25 mm dia steel	kg	101.00000	59.00	5959.00
3	Use rate of 32 mm dia drill rod	Rm	12.50000	31.16	389.50
	Reconditioning charges @	10%			38.95
4	Use rate of air hose	Hour	2.00000	12.19	24.38
Total cost of Materials				Rs:	6432.93

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Air compressor 8.5 cmm (diesel)	Hour	1.00000	280.01	280.01
	Fuel / Energy charges	Hour	1.00000	1506.96	1506.96
2	Jack hammer 2 Nos	Hour	2.00000	19.11	38.22
	Fuel / Energy charges	Hour	2.00000	0.00	0.00
Total hire charges of Machinery				Rs:	1825.19

C. LABOUR:

SI No	Description	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Crew for Air compressor	Hour	1.00000	333.22	333.22
2	Crew for Jack hammer	Hour	2.00000	520.65	1041.30
3	Mason Class-II	Day	0.50000	640.00	320.00
4	Bar bender	Day	0.50000	850.00	425.00
5	work inspector	Day	0.50000	775.00	387.50
6	mazdoor	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	3102.02

labour component/unit qty	310.20
Add contractor's profit and overhead charges	13.615% 42.20
labour component/unit qty (including contractor's profit)	<u>352.40</u>

ABSTRACT:

A. Cost of Materials		Rs:	6432.93
B. Hire charges of Machinery		Rs:	1825.19
C. Cost of Labour		Rs:	3102.02
		Total	Rs: 11360.14
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	1546.68
Total cost for	10.00 Nos.	Rs:	12906.82
Rate per each	(A+B+C+D)/10.0	Rs.	1290.68

IRR-CCDW-2 **STEEL AND CEMENT CONCRETE WORKS :**

- IRR-CCDW-2-1 Providing, fabricating and **placing in position reinforcement steel bars for RCC works** including cleaning, straightening, cutting, bending, hooking, lapping, welding wherever required, tying with 1.25 mm dia soft annealed steel wire, including cost of all materials, machinery, labour etc., **complete with initial lead upto 50 and all lifts.**

DATA:

RATE ANALYSISUNIT : **1000.00** kg**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rein.Steel with 5 % wastage	kg	1050.00000	59.00	61950.00
2	Binding wire 1.25 mm dia	kg	8.00000	64.00	512.00
3	Sundries (chairs / spacers etc)	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	62585.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

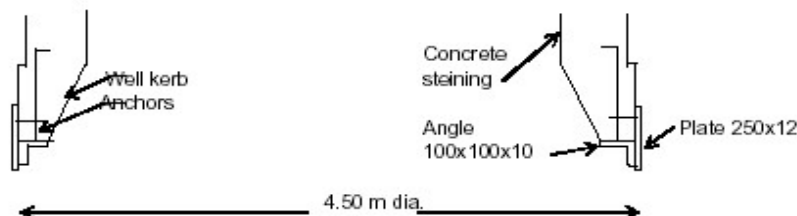
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Bar bender	Day	6.00000	850.00	5100.00
3	mazdoor	Day	11.00000	595.00	6545.00
Total cost of Labour				Rs:	12420.00

labour component/unit qty	12.40
Add contractor's profit and overhead charges	13.615% 1.70
labour component/unit qty (including contractor's profit)	<u>14.10</u>

ABSTRACT:

A. Cost of Materials		Rs:	62585.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	12420.00
		Total	Rs: 75005.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	10211.93
Total cost for	1000.00 kg	Rs:	85216.93
Rate per kg	(A+B+C+D)/1000.0	Rs.	85.22

- IRR-CCDW-2-2 Providing, fabricating and **fixing in position structural steel cutting edge** consisting of 100 x 100 x 10 mm angle and 250 x 12 mm plate for sinking for sinking 4.50 m outer diameter foundation wells foundation wells including cost of all materials, machinery, labour, bending, welding, providing anchors etc., complete **with initial lead upto 50 m and all lifts.**



DATA:

RATE ANALYSISUNIT : **615.00 kg****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Str.Steel angle with 2.5 % wastage	kg	216.10000	60.00	12966.00
2	Str.Steel plate with 2.5 % wastage	kg	342.30000	66.00	22591.80
3	Steel for anchors	kg	56.60000	59.00	3339.40
4	Acetyline gas	cum	0.50000	390.00	195.00
5	Oxygen gas	cum	1.50000	48.00	72.00
6	Welding electrodes	Nos	300.00000	17.00	5100.00
7	Sundries	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	44469.20

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Bending machine	Hour	8.00000	43.53	348.24
	Fuel / Energy charges	Hour	8.00000	126.90	1015.20
2	Welding set	Hour	30.00000	17.29	518.70
	Fuel / Energy charges	Hour	30.00000	101.52	3045.60
3	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	5337.74

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Str. Steel fabricator	Day	2.00000	850.00	1700.00
2	Welder / Gas cutter	Day	5.00000	695.00	3475.00
3	work inspector	Day	1.00000	775.00	775.00
4	mazdoor	Day	5.00000	595.00	2975.00
Total cost of Labour				Rs:	8925.00

labour component/unit qty

14.50

Add contractor's profit and overhead charges

13.615% 2.00

labour component/unit qty (including contractor's profit)

16.50**ABSTRACT:**

A. Cost of Materials

Rs: 44469.20

B. Hire charges of Machinery

Rs: 5337.74

C. Cost of Labour

Rs: 8925.00

Total

Rs: 58731.94

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs:

7996.35

Total cost for

615.00 kg

Rs:

66728.29**Rate per kg**

(A+B+C+D)/615.0

Rs.

108.50

IRR-CCDW-2-3 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**
(Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement), CA : 0.90cum, Blending Ratio of CA-50:30:20, FA : 0.40 cum)

Data

RATE ANALYSISUNIT : **15.38 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	3998.80000	4.22	16874.94
	Cement for incidentals @ 3 kg / cum	kg	46.14000	4.22	194.71
2	Coarse aggregate 40-20 mm	cum	6.92100	1441.00	9973.16
	Coarse aggregate 20-10 mm	cum	4.15260	1508.00	6262.12
	Coarse aggregate 10 mm below	cum	2.76840	1098.00	3039.70
3	Fine aggregate (Un-Screened)	cum	6.15200	605.00	3721.96
4	Super Plasticizer	kg	15.99520	63.00	1007.70
5	Use rate of shuttering for 40 uses	sqm	15.38000	327.50	5036.95
	Scaffolding @ of shuttering	10%			503.70
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	46635.44

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	2844.86

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
5	work inspector	Day	1.00000	775.00	775.00
6	Mason Class-I	Day	1.00000	710.00	710.00
7	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	15.38000	595.00	9151.10
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
8	Labour cost for shuttering	sqm	15.38000	146.85	2258.55
	Labour cost for scaffolding @	10%			225.86
Total cost of Labour				Rs:	29561.91

labour component/unit qty

1922.10

Add contractor's profit and overhead charges

13.615% 261.70

labour component/unit qty (including contractor's profit)

2183.80**ABSTRACT:**

A. Cost of Materials

Rs: 46635.44

B. Hire charges of Machinery

Rs: 2844.86

C. Cost of Labour

Rs: 29561.91

Total

Rs: 79042.21

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs:

10761.6

Total cost for

15.38 cum

Rs:

89803.81**Rate per cum**

(A+B+C+D)/15.38

Rs.

5839.00

IRR-CCDW-2-4 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

(Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),

CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum)

DATA:

RATE ANALYSISUNIT : **14.40 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	3600.00000	4.22	15192.00
	Cement for incidentals @ 3 kg / cum	kg	43.20000	4.22	182.30
2	Coarse aggregate 80-40 mm	cum	4.93920	786.00	3882.21
	Coarse aggregate 40-20 mm	cum	4.23360	1441.00	6100.62
	Coarse aggregate 20-10 mm	cum	2.82240	1508.00	4256.18
	Coarse aggregate 10 mm below	cum	2.11680	1098.00	2324.25
3	Fine aggregate (Un-Screened)	cum	5.04000	605.00	3049.20
4	Super Plasticizer	kg	14.40000	63.00	907.20
5	Use rate of shuttering for 40 uses	sqm	14.40000	327.50	4716.00
	Scaffolding @ of shuttering	10%			471.60
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	41102.06

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 600/400 ltr (diesel)	Hour	8.00000	93.08	744.64
	Fuel / Energy charges	Hour	8.00000	267.90	2143.20
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 60 mm dia (petrol)	Hour	8.00000	10.26	82.08
	Fuel / Energy charges	Hour	8.00000	45.20	361.60
Total hire charges of Machinery				Rs:	4358.94

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
5	Mason Class-I	Day	1.00000	710.00	710.00
6	work inspector	Day	1.00000	775.00	775.00
7	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	14.40000	595.00	8568.00
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
8	Labour cost for shuttering	sqm	14.40000	146.85	2114.64
	Labour cost for scaffolding @	10%			211.46
Total cost of Labour				Rs:	28820.50

labour component/unit qty

2001.40

Add contractor's profit and overhead charges

13.615% 272.50

labour component/unit qty (including contractor's profit)

2273.90**ABSTRACT:**

A. Cost of Materials

Rs: 41102.06

B. Hire charges of Machinery

Rs: 4358.94

C. Cost of Labour

Rs: 28820.50

Total

Rs: 74281.50

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs:

10113.43

Total cost for

14.40 cum

Rs:

84394.93**Rate per cum**

(A+B+C+D)/14.40

Rs.

5860.76

IRR-CCDW-2-5 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**
(Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **16.36 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	3599.20000	4.22	15188.62
	Cement for incidentals @ 3 kg / cum	kg	49.08000	4.22	207.12
2	Coarse aggregate 40-20 mm	cum	7.36200	1441.00	10608.64
	Coarse aggregate 20-10 mm	cum	4.41720	1508.00	6661.14
	Coarse aggregate 10 mm below	cum	2.94480	1098.00	3233.39
3	Fine aggregate (Un-Screened)	cum	6.54400	605.00	3959.12
4	Super Plasticizer	kg	14.39680	63.00	907.00
5	Use rate of shuttering for 40 uses	sqm	16.36000	327.50	5357.90
	Scaffolding @ of shuttering	10%			535.79
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	46679.22

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	2844.86

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Vibrator	Hour	8.00000	249.86	1998.88
5	Mason Class-I	Day	1.00000	710.00	710.00
6	work inspector	Day	1.00000	775.00	775.00
7	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	16.36000	595.00	9734.20
8	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
9	Labour cost for shuttering	sqm	16.36000	146.85	2402.47
10	Labour cost for scaffolding @	10%			240.25
Total cost of Labour				Rs:	30303.32

labour component/unit qty

1852.30

Add contractor's profit and overhead charges

13.615% 252.20

labour component/unit qty (including contractor's profit)

2104.50

ABSTRACT:

A. Cost of Materials		Rs:	46679.22
B. Hire charges of Machinery		Rs:	2844.86
C. Cost of Labour		Rs:	30303.32
		Total Rs:	79827.40
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	10868.5
Total cost for	16.36 cum	Rs:	90695.90
Rate per cum	(A+B+C+D)/16.36	Rs.	5543.76

IRR-CCDW-2-6 Providing and laying **insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**
(Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.98cum, Blending Ratio of CA-35:30:20:15, FA : 0.35 cum)

DATA:

RATE ANALYSISUNIT : **14.55 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	3201.00000	4.22	13508.22
	Cement for incidentals @ 3 kg / cum	kg	43.65000	4.22	184.20
2	Coarse aggregate 80-40 mm	cum	4.99065	786.00	3922.65
	Coarse aggregate 40-20 mm	cum	4.27770	1441.00	6164.17
	Coarse aggregate 20-10 mm	cum	2.85180	1508.00	4300.51
	Coarse aggregate 10 mm below	cum	2.13885	1098.00	2348.46
3	Fine aggregate (Un-Screened)	cum	5.09250	605.00	3080.96
4	Super Plasticizer	kg	12.80400	63.00	806.65
5	Use rate of shuttering for 40 uses	sqm	14.55000	327.50	4765.13
	Scaffolding @ of shuttering	10%			476.51
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	39577.96

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 600/400 ltr (diesel)	Hour	8.00000	93.08	744.64
	Fuel / Energy charges	Hour	8.00000	267.90	2143.20
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 60 mm dia (petrol)	Hour	8.00000	10.26	82.08
	Fuel / Energy charges	Hour	8.00000	45.20	361.60
Total hire charges of Machinery				Rs:	4358.94

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Vibrator	Hour	8.00000	249.86	1998.88
5	Mason Class-I	Day	1.00000	710.00	710.00
6	work inspector	Day	1.00000	775.00	775.00
7	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	14.55000	595.00	8657.25
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
8	Labour cost for shuttering	sqm	14.55000	146.85	2136.67
	Labour cost for scaffolding @	10%			213.67
Total cost of Labour				Rs:	28933.99

labour component/unit qty 1988.60
Add contractor's profit and overhead charges 13.615% 270.70
labour component/unit qty (including contractor's profit) **2259.30**

ABSTRACT:

A. Cost of Materials		Rs:	39577.96
B. Hire charges of Machinery		Rs:	4358.94
C. Cost of Labour		Rs:	28933.99
		Total Rs:	72870.89
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	9921.37
Total cost for	14.55 cum	Rs:	82792.26
Rate per cum	(A+B+C+D)/14.55	Rs.	5690.19

IRR-CCDW-2-7 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts. (Cement content : 220 kg / cum)**
(Cement content: 310 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **14.19 cum****A. MATERIALS:**

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	4398.90000	4.22	18563.36
	Cement for incidentals @ 3 kg / cum	kg	42.57000	4.22	179.65
2	Coarse aggregate 40-20 mm	cum	6.38550	1441.00	9201.51
	Coarse aggregate 20-10 mm	cum	3.83130	1508.00	5777.60
	Coarse aggregate 10 mm below	cum	2.55420	1098.00	2804.51
3	Fine aggregate (Un-Screened)	cum	5.67600	605.00	3433.98
4	Super Plasticizer	kg	17.59560	63.00	1108.52
5	Use rate of shuttering for 40 uses	sqm	14.19000	327.50	4647.23
	Scaffolding @ of shuttering	10%			464.72
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	46201.58

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	2844.86

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Vibrator	Hour	8.00000	249.86	1998.88
5	Mason Class-I	Day	1.00000	710.00	710.00
6	work inspector	Day	1.00000	775.00	775.00
7	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	14.19000	595.00	8443.05
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
8	Labour cost for shuttering	sqm	14.19000	146.85	2083.80
	Labour cost for scaffolding @	10%			208.38
Total cost of Labour				Rs:	28661.63

labour component/unit qty 2019.80

Add contractor's profit and overhead charges 13.615% 275.00

labour component/unit qty (including contractor's profit) **2294.80****ABSTRACT:**

A. Cost of Materials	Rs:	46201.58
B. Hire charges of Machinery	Rs:	2844.86
C. Cost of Labour	Rs:	28661.63
	Total	Rs: 77708.07
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	10579.95
Total cost for	14.19 cum	Rs: 88288.02
Rate per cum	(A+B+C+D)/14.19	Rs. 6221.85

IRR-CCDW-2-8 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for sub-structure / super- structure works** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **15.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	4800.00000	4.22	20256.00
	Cement for incidentals @ 5 kg / cum	kg	75.00000	4.22	316.50
2	Coarse aggregate 40-20 mm	cum	6.75000	1441.00	9726.75
	Coarse aggregate 20-10 mm	cum	4.05000	1508.00	6107.40
	Coarse aggregate 10 mm below	cum	2.70000	1098.00	2964.60
3	Fine aggregate (Un-Screened)	cum	6.00000	605.00	3630.00
4	Super Plasticizer	kg	19.20000	63.00	1209.60
5	Use rate of shuttering	sqm	30.00000	327.50	9825.00
	Scaffolding @ of shuttering	25%			2456.25
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	56512.60

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	2844.86

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Vibrator	Hour	8.00000	249.86	1998.88
5	Mason Class-I	Day	1.00000	710.00	710.00
6	work inspector	Day	1.00000	775.00	775.00
7	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying including lifting	Day	4.00000	595.00	2380.00
	for conveying concrete	Day	15.00000	595.00	8925.00
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
8	Labour cost for shuttering	sqm	15.00000	146.85	2202.75
	Labour cost for scaffolding @	25%			550.69
Total cost of Labour				Rs:	30199.84

labour component/unit qty 2013.30
 Add contractor's profit and overhead charges 13.615% 274.10
 labour component/unit qty (including contractor's profit) **2287.40**

ABSTRACT:

A. Cost of Materials	Rs:	56512.60
B. Hire charges of Machinery	Rs:	2844.86
C. Cost of Labour	Rs:	30199.84
	Total	Rs: 89557.30
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	12193.23
Total cost for	Rs:	101750.53
Rate per cum	(A+B+C+D)/15.0	Rs. 6783.37

IRR-CCDW-2-9 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for sub-structure / super- structure works** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	5200.80000	4.22	21947.38
	Cement for incidentals @ 5 kg / cum	kg	78.80000	4.22	332.54
2	Coarse aggregate 20-10 mm	cum	8.19520	1508.00	12358.36
	Coarse aggregate 10 mm below	cum	4.41280	1098.00	4845.25
3	Fine aggregate (Un-Screened)	cum	7.09200	605.00	4290.66
4	Super Plasticizer	kg	20.80320	63.00	1310.60
5	Use rate of shuttering	sqm	31.52000	327.50	10322.80
	Scaffolding @ of shuttering	25%			2580.70
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	58008.79

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	2844.86

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Vibrator	Hour	8.00000	249.86	1998.88
5	Mason Class-I	Day	1.00000	710.00	710.00
6	work inspector	Day	1.00000	775.00	775.00
7	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	4.00000	595.00	2380.00
	for conveying concrete	Day	15.76000	595.00	9377.20
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
8	Labour cost for shuttering	sqm	31.52000	146.85	4628.71
	Labour cost for scaffolding @	25%			1157.18
Total cost of Labour				Rs:	33684.49

labour component/unit qty 2137.30

Add contractor's profit and overhead charges 13.615% 291.00

labour component/unit qty (including contractor's profit) **2428.30****ABSTRACT:**

A. Cost of Materials Rs: 58008.79

B. Hire charges of Machinery Rs: 2844.86

C. Cost of Labour Rs: 33684.49

Total Rs: 94538.14

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 12871.37

Total cost for 15.76 cum Rs: **107409.51****Rate per cum** (A+B+C+D)/15.76 Rs: **6815.32**

IRR-CCDW-2-10 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for sub-structure / super- structure works** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 280 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **15.71 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	4398.80000	4.22	18562.94
	Cement for incidentals @ 5 kg / cum	kg	78.55000	4.22	331.48
2	Coarse aggregate 20-10 mm	cum	8.16920	1508.00	12319.15
	Coarse aggregate 10 mm below	cum	4.39880	1098.00	4829.88
3	Fine aggregate (Un-Screened)	cum	7.06950	605.00	4277.05
4	Super Plasticizer	kg	17.59520	63.00	1108.50
5	Use rate of shuttering for 40 uses	sqm	31.42000	327.50	10290.05
	Scaffolding @ of shuttering	25%			2572.51
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	54312.06

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	2844.86

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Vibrator	Hour	8.00000	249.86	1998.88
5	Mason Class-I	Day	1.00000	710.00	710.00
6	work inspector	Day	1.00000	775.00	775.00
7	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	4.00000	595.00	2380.00
	for conveying concrete	Day	15.71000	595.00	9347.45
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
8	Labour cost for shuttering	sqm	31.42000	146.85	4614.03
	Labour cost for scaffolding @	25%			1153.51
Total cost of Labour				Rs:	33636.39

labour component/unit qty 2141.10

Add contractor's profit and overhead charges 13.615% 291.50

labour component/unit qty (including contractor's profit) **2432.60****ABSTRACT:**

A. Cost of Materials Rs: 54312.06

B. Hire charges of Machinery Rs: 2844.86

C. Cost of Labour Rs: 33636.39

Total Rs: 90793.31

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 12361.51

Total cost for 15.71 cum Rs: **103154.82****Rate per cum** (A+B+C+D)/15.71 Rs: **6566.19**

IRR-CCDW-2-11 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for sub-structure / super- structure works** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.** (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement), CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **18.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	3960.00000	4.22	16711.20
	Cement for incidentals @ 5 kg / cum	kg	90.00000	4.22	379.80
2	Coarse aggregate 20-10 mm	cum	9.36000	1508.00	14114.88
	Coarse aggregate 10 mm below	cum	5.04000	1098.00	5533.92
3	Fine aggregate (Un-Screened)	cum	8.10000	605.00	4900.50
4	Super Plasticizer	kg	15.84000	63.00	997.92
5	Use rate of shuttering for 40 uses	sqm	36.00000	327.50	11790.00
	Scaffolding @ of shuttering	25%			2947.50
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	57396.22

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
4	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	2844.86

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Crew for Vibrator	Hour	8.00000	249.86	1998.88
5	Mason Class-I	Day	1.00000	710.00	710.00
6	work inspector	Day	1.00000	775.00	775.00
7	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	4.00000	595.00	2380.00
	for conveying concrete	Day	18.00000	595.00	10710.00
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
8	Labour cost for shuttering	sqm	36.00000	146.85	5286.60
	Labour cost for scaffolding @	25%			1321.65
Total cost of Labour				Rs:	35839.65

labour component/unit qty 1991.10

Add contractor's profit and overhead charges 13.615% 271.10

labour component/unit qty (including contractor's profit) **2262.20****ABSTRACT:**

A. Cost of Materials Rs: 57396.22

B. Hire charges of Machinery Rs: 2844.86

C. Cost of Labour Rs: 35839.65

Total Rs: 96080.73

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 13081.39

Total cost for 18.00 cum Rs: **109162.12****Rate per cum (A+B+C+D)/18.0 Rs: **6064.56****

IRR-CCDW-2-12 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for well kerb** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: If water is to be brought from other place add only lead charges @ 500 ltr / cum.
(Cement content: 350 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **15.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	5250.0000	4.22	22155.00
2	Coarse aggregate 20-10 mm	cum	7.8000	1508.00	11762.40
	Coarse aggregate 10 mm below	cum	4.2000	1098.00	4611.60
3	Fine aggregate (Un-Screened)	cum	6.7500	605.00	4083.75
4	Super Plasticizer	kg	21.0000	63.00	1323.00
5	Use rate of curved shutter (40 uses)	sqm	82.5000	360.25	29720.63
6	Sundries	LS	0.5000	41.00	20.50
Total cost of Materials				Rs:	73676.88

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.0000	54.70	437.60
	Fuel / Energy charges	Hour	8.0000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.5000	10.34	5.17
	Fuel / Energy charges	Hour	0.5000	133.95	66.98
3	Needle vibrator 40 mm dia (petrol)	Hour	8.0000	8.39	67.12
	Fuel / Energy charges	Hour	8.0000	30.14	241.12
Total hire charges of Machinery				Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.0000	347.10	2776.80
2	Crew for Pump	Hour	0.5000	173.47	86.74
3	Crew for Vibrator	Hour	8.0000	249.86	1998.88
4	Mason Class-I	Day	1.0000	710.00	710.00
5	work inspector	Day	1.0000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.0000	595.00	6545.00
	for loading mortar pans	Day	4.0000	595.00	2380.00
	for laying	Day	3.0000	595.00	1785.00
	for conveying concrete	Day	15.0000	595.00	8925.00
	for cleaning/ washing/ curing	Day	1.0000	595.00	595.00
7	Labour cost for shuttering	sqm	82.5000	146.85	12115.13
Total cost of Labour				Rs:	38692.55

labour component/unit qty	2579.50
Add contractor's profit and overhead charges	13.615% 351.20
labour component/unit qty (including contractor's profit)	2930.70

ABSTRACT:

A. Cost of Materials	Rs:	73676.88
B. Hire charges of Machinery	Rs:	1889.59
C. Cost of Labour	Rs:	38692.55
	Total	Rs: 114259.02
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	15556.37
Total cost for	15.00 cum	Rs: 129815.39
Rate per cum	(A+B+C+D)/15.0	Rs. 8654.36

IRR-CCDW-2-13 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for well steining** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing **etc., complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **15.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	4800.00000	4.22	20256.00
	Cement for incidentals @ 2 kg / cum	kg	30.00000	4.22	126.60
2	Coarse aggregate 40-20 mm	cum	6.75000	1441.00	9726.75
	Coarse aggregate 20-10 mm	cum	4.05000	1508.00	6107.40
	Coarse aggregate 10 mm below	cum	2.70000	1098.00	2964.60
3	Fine aggregate (Un-Screened)	cum	6.00000	605.00	3630.00
4	Super Plasticizer	kg	19.20000	63.00	1209.60
5	Use rate of curved shutter (40 uses)	sqm	60.00000	360.25	21615.00
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	65656.45

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	15.00000	595.00	8925.00
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering	sqm	60.00000	146.85	8811.00
Total cost of Labour				Rs:	35388.42

labour component/unit qty 2359.20

Add contractor's profit and overhead charges 13.615% 321.20

labour component/unit qty (including contractor's profit) **2680.40****ABSTRACT:**

A. Cost of Materials	Rs:	65656.45
B. Hire charges of Machinery	Rs:	1889.59
C. Cost of Labour	Rs:	35388.42
	Total Rs:	102934.46
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	14014.53
Total cost for	15.00 cum Rs:	116948.99
Rate per cum	(A+B+C+D)/15.0	Rs. 7796.60

IRR-CCDW-2-14 Providing and **laying insitu M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for well bottom plug by tremie or skip box method** including cost of all materials, machinery, labour, batching, mixing, placing in position as per detailed specifications etc., **complete with initial lead upto 50 m and all lifts. (Cement content : 350 kg / cum)**
(Cement content: 350 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **14.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	4900.00000	4.22	20678.00
2	Coarse aggregate 20-10 mm	cum	7.28000	1508.00	10978.24
	Coarse aggregate 10 mm below	cum	3.92000	1098.00	4304.16
3	Fine aggregate (Un-Screened)	cum	6.30000	605.00	3811.50
4	Super Plasticizer	kg	19.60000	63.00	1234.80
TOTAL				Rs:	41006.70
Add for tremie arrangement @ 1%				Rs:	410.07
Total cost of Materials				Rs:	41416.77

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Sundries(Hopper etc.)	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	1786.35

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Fitter shuttering	Day	1.00000	640.00	640.00
4	work inspector	Day	1.00000	775.00	775.00
5	mazdoor				
	for erecting/ dismantling tremie	Day	4.00000	595.00	2380.00
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for feeding tremie hopper	Day	2.00000	595.00	1190.00
	for conveying concrete	Day	16.00000	595.00	9520.00
Total cost of Labour				Rs:	26293.54

labour component/unit qty 1878.10

Add contractor's profit and overhead charges 13.615% 255.70

labour component/unit qty (including contractor's profit) **2133.80****ABSTRACT:**

A. Cost of Materials Rs: 41416.77

B. Hire charges of Machinery Rs: 1786.35

C. Cost of Labour Rs: 26293.54

Total Rs: 69496.66

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 9461.97

Total cost for 14.00 cum Rs: **78958.63****Rate per cum (A+B+C+D)/14.0 Rs: **5639.90****

IRR-CCDW-2-15 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for well top plug** including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with **initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 280 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **14.29 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	4001.20000	4.22	16885.06
2	Coarse aggregate 40-20 mm	cum	6.43050	1441.00	9266.35
	Coarse aggregate 20-10 mm	cum	3.85830	1508.00	5818.32
	Coarse aggregate 10 mm below	cum	2.57220	1098.00	2824.28
3	Fine aggregate (Un-Screened)	cum	5.71600	605.00	3458.18
4	Super Plasticizer	kg	16.00480	63.00	1008.30
Total cost of Materials				Rs:	39260.49

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	14.29000	595.00	8502.55
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
Total cost of Labour				Rs:	26154.97

labour component/unit qty 1830.30

Add contractor's profit and overhead charges 13.615% 249.20

labour component/unit qty (including contractor's profit) **2079.50****ABSTRACT:**

A. Cost of Materials	Rs:	39260.49
B. Hire charges of Machinery	Rs:	1889.59
C. Cost of Labour	Rs:	26154.97
	Total Rs:	67305.05
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	9163.58
Total cost for	14.29 cum Rs:	76468.63
Rate per cum	(A+B+C+D)/14.29 Rs.	5351.20

IRR-CCDW-2-16 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for well cap** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	5200.80000	4.22	21947.38
	Cement for incidentals @ 5 kg / cum	kg	78.80000	4.22	332.54
2	Coarse aggregate 20-10 mm	cum	8.19520	1508.00	12358.36
	Coarse aggregate 10 mm below	cum	4.41280	1098.00	4845.25
3	Fine aggregate (Un-Screened)	cum	7.09200	605.00	4290.66
4	Super Plasticizer	kg	20.80320	63.00	1310.60
5	Use rate of curved shutter (40 uses)	sqm	15.76000	327.50	5161.40
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	50266.69

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	15.76000	595.00	9377.20
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering	sqm	15.76000	146.85	2314.36
Total cost of Labour				Rs:	29343.98

labour component/unit qty 1861.90

Add contractor's profit and overhead charges 13.615% 253.50

labour component/unit qty (including contractor's profit) **2115.40****ABSTRACT:**

A. Cost of Materials	Rs:	50266.69
B. Hire charges of Machinery	Rs:	1889.59
C. Cost of Labour	Rs:	29343.98
	Total	Rs: 81500.26
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	11096.26
Total cost for	15.76 cum	Rs: 92596.52
Rate per cum	(A+B+C+D)/15.76	Rs. 5875.41

IRR-CCDW-2-17 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates **for piers and abutments** including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.98cum, Blending Ratio of CA-35:30:20:15, FA : 0.35 cum)

DATA:

RATE ANALYSISUNIT : **14.40 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	3600.00000	4.22	15192.00
	Cement for incidentals @ 5 kg / cum	kg	72.00000	4.22	303.84
2	Coarse aggregate 80-40 mm	cum	4.93920	786.00	3882.21
	Coarse aggregate 40-20 mm	cum	4.23360	1441.00	6100.62
	Coarse aggregate 20-10 mm	cum	2.82240	1508.00	4256.18
	Coarse aggregate 10 mm below	cum	2.11680	1098.00	2324.25
3	Fine aggregate (Un-Screened)	cum	5.04000	605.00	3049.20
4	Super Plasticizer	kg	14.40000	63.00	907.20
5	Use rate of shuttering for 40 uses	sqm	39.60000	343.88	13617.65
6	Scaffolding @ of shuttering	30%			4085.30
Total cost of Materials				Rs:	53718.45

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 600/400 ltr (diesel)	Hour	8.00000	93.08	744.64
	Fuel / Energy charges	Hour	8.00000	267.90	2143.20
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 60 mm dia (petrol)	Hour	8.00000	10.26	82.08
	Fuel / Energy charges	Hour	8.00000	45.20	361.60
Total hire charges of Machinery				Rs:	3403.67

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	6.00000	595.00	3570.00
	for conveying concrete	Day	14.40000	595.00	8568.00
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering	sqm	39.60000	146.85	5815.26
	Labour cost for scaffolding @	30%			1744.58
Total cost of Labour				Rs:	35565.26

labour component/unit qty 2469.80

Add contractor's profit and overhead charges 13.615% 336.30

labour component/unit qty (including contractor's profit) **2806.10****ABSTRACT:**

A. Cost of Materials	Rs:	53718.45
B. Hire charges of Machinery	Rs:	3403.67
C. Cost of Labour	Rs:	35565.26
Total	Rs:	92687.38

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 12619.39

Total cost for 14.40 cum Rs: **105306.77****Rate per cum** (A+B+C+D)/14.40 Rs. **7312.97**

IRR-CCDW-2-18 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates **for piers and abutments** including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum)

DATA:

RATE ANALYSISUNIT : **14.55 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	3201.00000	4.22	13508.22
	Cement for incidentals @ 5 kg / cum	kg	72.75000	4.22	307.01
2	Coarse aggregate 80-40 mm	cum	4.99065	786.00	3922.65
	Coarse aggregate 40-20 mm	cum	4.27770	1441.00	6164.17
	Coarse aggregate 20-10 mm	cum	2.85180	1508.00	4300.51
	Coarse aggregate 10 mm below	cum	2.13885	1098.00	2348.46
3	Fine aggregate (Un-Screened)	cum	5.09250	605.00	3080.96
4	Super Plasticizer	kg	12.80400	63.00	806.65
5	Use rate of shuttering for 40 uses	sqm	40.01250	343.88	13759.50
6	Scaffolding @ of shuttering	30%			4127.85
Total cost of Materials				Rs:	52325.98

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 600/400 ltr (diesel)	Hour	8.00000	93.08	744.64
	Fuel / Energy charges	Hour	8.00000	267.90	2143.20
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 60 mm dia (petrol)	Hour	8.00000	10.26	82.08
	Fuel / Energy charges	Hour	8.00000	45.20	361.60
Total hire charges of Machinery				Rs:	3403.67

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	6.00000	595.00	3570.00
	for conveying concrete	Day	14.55000	595.00	8657.25
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering	sqm	40.01250	146.85	5875.84
	Labour cost for scaffolding @	30%			1762.75
Total cost of Labour				Rs:	35733.26

labour component/unit qty 2455.90

Add contractor's profit and overhead charges 13.615% 334.40

labour component/unit qty (including contractor's profit) **2790.30****ABSTRACT:**

A. Cost of Materials Rs: 52325.98

B. Hire charges of Machinery Rs: 3403.67

C. Cost of Labour Rs: 35733.26

Total Rs: 91462.91

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 12452.68

Total cost for 14.55 cum Rs: **103915.59****Rate per cum (A+B+C+D)/14.55 Rs: **7141.96****

IRR-CCDW-2-19 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for piers and abutments** including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **16.36 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	3599.20000	4.22	15188.62
	Cement for incidentals @ 5 kg / cum	kg	81.80000	4.22	345.20
2	Coarse aggregate 40-20 mm	cum	7.36200	1441.00	10608.64
	Coarse aggregate 20-10 mm	cum	4.41720	1508.00	6661.14
	Coarse aggregate 10 mm below	cum	2.94480	1098.00	3233.39
3	Fine aggregate (Un-Screened)	cum	6.54400	605.00	3959.12
4	Super Plasticizer	kg	14.39680	63.00	907.00
5	Use rate of shuttering for 40 uses	sqm	44.99000	343.88	15471.16
6	Scaffolding @ of shuttering	30%			4641.35
Total cost of Materials				Rs:	61015.62

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	5.00000	595.00	2975.00
	for conveying concrete	Day	16.36000	595.00	9734.20
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering	sqm	44.99000	146.85	6606.78
	Labour cost for scaffolding @	30%			1982.03
Total cost of Labour				Rs:	37165.43

labour component/unit qty 2271.70

Add contractor's profit and overhead charges 13.615% 309.30

labour component/unit qty (including contractor's profit) **2581.00****ABSTRACT:**

A. Cost of Materials	Rs:	61015.62
B. Hire charges of Machinery	Rs:	1889.59
C. Cost of Labour	Rs:	37165.43
Total	Rs:	100070.64

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 13624.62

Total cost for 16.36 cum Rs: **113695.26****Rate per cum** (A+B+C+D)/16.36 Rs: **6949.59**

IRR-CCDW-2-20 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for cantiliver / counterfort retaining walls** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

Note: If water is to be brought from other place add only lead charges @ 500 ltr / cum.

DATA:

RATE ANALYSISUNIT : **16.25 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	5200.000000	4.22	21944.00
	Cement for incidentals @ 5 kg / cum	kg	81.250000	4.22	342.88
2	Coarse aggregate 40-20 mm	cum	7.312500	1441.00	10537.31
	Coarse aggregate 20-10 mm	cum	4.387500	1508.00	6616.35
	Coarse aggregate 10 mm below	cum	2.925000	1098.00	3211.65
3	Fine aggregate (Un-Screened)	cum	6.500000	605.00	3932.50
4	Super Plasticizer	kg	20.800000	63.00	1310.40
5	Use rate of shuttering for 40 uses	sqm	52.812500	327.50	17296.09
	Scaffolding @ of shuttering	25%			4324.02
6	Sundries	LS	0.500000	41.00	20.50
Total cost of Materials				Rs:	69535.70

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	5.00000	595.00	2975.00
	for conveying concrete	Day	16.25000	595.00	9668.75
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering	sqm	52.81250	146.85	7755.52
	Labour cost for scaffolding @	25%			1938.88
Total cost of Labour				Rs:	38205.57

labour component/unit qty

2351.10

Add contractor's profit and overhead charges

13.615%

320.10

labour component/unit qty (including contractor's profit)

2671.20**ABSTRACT:**

A. Cost of Materials

Rs: 69535.70

B. Hire charges of Machinery

Rs: 1889.59

C. Cost of Labour

Rs: 38205.57

Total Rs: 109630.86

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 14926.24

Total cost for

16.25 cum

Rs:

124557.10**Rate per cum**

(A+B+C+D)/16.25

Rs.

7665.05

IRR-CCDW-2-21 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **with placing and sinking plums of size 150 to 80 mm upto 15 percent for gravity type retaining walls / piers / abutments** etc., including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete **with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.765cum, Blending Ratio of CA--50:30:20, FA : 0.34 cum,
plums of size 150 to 80 mm : 0.25cum)

DATA:

RATE ANALYSISUNIT : **18.09 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	4703.40000	4.22	19848.35
	Cement for incidentals @ 4 kg / cum	kg	72.36000	4.22	305.36
2	Coarse aggregate 40-20 mm	cum	6.91943	1441.00	9970.90
	Coarse aggregate 20-10 mm	cum	4.15166	1508.00	6260.70
	Coarse aggregate 10 mm below	cum	2.76777	1098.00	3039.01
3	Plums of size 150 to 80 mm	cum	4.52250	466.00	2107.49
4	Fine aggregate (Un-Screened)	cum	6.15060	605.00	3721.11
5	Super Plasticizer	kg	18.81360	63.00	1185.26
	Use rate of shuttering for 40 uses	sqm	49.74750	327.50	16292.31
6	Scaffolding @ of shuttering	30%			4887.69
Total cost of Materials				Rs:	67618.18

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 60 mm dia (petrol)	Hour	8.00000	10.26	82.08
	Fuel / Energy charges	Hour	8.00000	45.20	361.60
Total hire charges of Machinery				Rs:	2025.03

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	5.00000	595.00	2975.00
	for placing plums	Day	2.00000	595.00	1190.00
	for conveying concrete	Day	15.38000	595.00	9151.10
	for conveying plums	Day	2.00000	595.00	1190.00
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour for shuttering	sqm	49.74750	146.85	7305.42
	Labour for scaffolding @	30%			2191.63
Total cost of Labour				Rs:	39870.57

labour component/unit qty 2204.00

Add contractor's profit and overhead charges 13.615% 300.10

labour component/unit qty (including contractor's profit) **2504.10****ABSTRACT:**

A. Cost of Materials	Rs:	67618.18
B. Hire charges of Machinery	Rs:	2025.03
C. Cost of Labour	Rs:	39870.57
	Total	Rs: 109513.78
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	14910.3
Total cost for	Rs:	124424.08
Rate per cum	(A+B+C+D)/18.09	Rs. 6878.06

IRR-CCDW-2-22 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard,graded aggregates **for cast in-situ pipes** including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with **initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA-50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **15.38 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	3998.80000	4.22	16874.94
	Cement for incidentals @ 5 kg / cum	kg	76.90000	4.22	324.52
2	Coarse aggregate 40-20 mm	cum	6.92100	1441.00	9973.16
	Coarse aggregate 20-10 mm	cum	4.15260	1508.00	6262.12
	Coarse aggregate 10 mm below	cum	2.76840	1098.00	3039.70
3	Fine aggregate (Un-Screened)	cum	6.15200	605.00	3721.96
4	Super Plasticizer	kg	15.99520	63.00	1007.70
5	Use rate of shuttering for 40 uses	sqm	30.76000	343.88	10577.75
	Scaffolding @ of shuttering	15%			1586.66
6	Sundries	LS	0.50000	41.00	20.50
	Total cost of Materials			Rs:	53389.01

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
	Total hire charges of Machinery			Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	15.38000	595.00	9151.10
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour for shuttering	sqm	30.76000	146.85	4517.11
	Labour for scaffolding @	15%			677.57
	Total cost of Labour			Rs:	31998.20

labour component/unit qty 2080.50

Add contractor's profit and overhead charges 13.615% 283.30

labour component/unit qty (including contractor's profit) **2363.80****ABSTRACT:**

A. Cost of Materials Rs: 53389.01
 B. Hire charges of Machinery Rs: 1889.59
 C. Cost of Labour Rs: 31998.20

Total Rs: 87276.80

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 11882.74

Total cost for 15.38 cum Rs: **99159.54****Rate per cum (A+B+C+D)/15.38 Rs: **6447.30****

IRR-CCDW-2-23 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates **for cast in-situ pipes** including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.98cum, Blending Ratio of CA-35:30:20:15, FA : 0.35 cum)

DATA:

RATE ANALYSISUNIT : **14.40 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	3600.00000	4.22	15192.00
	Cement for incidentals @ 5 kg / cum	kg	72.00000	4.22	303.84
2	Coarse aggregate 80-40 mm	cum	4.93920	786.00	3882.21
	Coarse aggregate 40-20 mm	cum	4.23360	1441.00	6100.62
	Coarse aggregate 20-10 mm	cum	2.82240	1508.00	4256.18
	Coarse aggregate 10 mm below	cum	2.11680	1098.00	2324.25
3	Fine aggregate (Un-Screened)	cum	5.04000	605.00	3049.20
4	Super Plasticizer	kg	14.40000	63.00	907.20
5	Use rate of shuttering for 40 uses	sqm	28.80000	343.88	9903.74
6	Scaffolding @ of shuttering	15%			1485.56
	Total cost of Materials			Rs:	47404.80

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 600/400 ltr (diesel)	Hour	8.00000	93.08	744.64
	Fuel / Energy charges	Hour	8.00000	267.90	2143.20
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 60 mm dia (petrol)	Hour	8.00000	10.26	82.08
	Fuel / Energy charges	Hour	8.00000	45.20	361.60
	Total hire charges of Machinery			Rs:	3403.67

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	14.40000	595.00	8568.00
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering	sqm	28.80000	146.85	4229.28
	Labour cost for scaffolding @	15%			634.39
	Total cost of Labour			Rs:	31084.09

labour component/unit qty 2158.60

Add contractor's profit and overhead charges 13.615% 293.90

labour component/unit qty (including contractor's profit) **2452.50****ABSTRACT:**

A. Cost of Materials Rs: 47404.80

B. Hire charges of Machinery Rs: 3403.67

C. Cost of Labour Rs: 31084.09

Total Rs: 81892.56

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 11149.67

Total cost for 14.40 cum Rs: **93042.23****Rate per cum (A+B+C+D)/14.40 Rs: **6461.27****

IRR-CCDW-2-24 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for deck slab & kerb** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	5200.80000	4.22	21947.38
	Cement for incidentals @ 5 kg / cum	kg	78.80000	4.22	332.54
2	Coarse aggregate 20-10 mm	cum	8.19520	1508.00	12358.36
	Coarse aggregate 10 mm below	cum	4.41280	1098.00	4845.25
3	Fine aggregate (Un-Screened)	cum	7.09200	605.00	4290.66
4	Super Plasticizer	kg	20.80320	63.00	1310.60
5	Use rate of shuttering for 30 uses	sqm	39.40000	401.79	15830.53
	Scaffolding @ of shuttering	250%			39576.33
6	Sundries	LS	1.00000	41.00	41.00
Total cost of Materials				Rs:	100532.65

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	2.00000	710.00	1420.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	4.00000	595.00	2380.00
	for conveying concrete	Day	15.76000	595.00	9377.20
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering	sqm	39.40000	146.85	5785.89
	Labour cost for scaffolding @	250%			14464.73
Total cost of Labour				Rs:	48585.24

labour component/unit qty

3082.80

Add contractor's profit and overhead charges

13.615%

419.70

labour component/unit qty (including contractor's profit)

3502.50**ABSTRACT:**

A. Cost of Materials

Rs: 100532.65

B. Hire charges of Machinery

Rs: 1889.59

C. Cost of Labour

Rs: 48585.24

Total

Rs: 151007.48

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs:

20559.67

Total cost for

15.76 cum

Rs:

171567.15**Rate per cum**

(A+B+C+D)/15.76

Rs.

10886.24

IRR-CCDW-2-25 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for columns and beams** including cost of all materials, labour, machinery, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, **finishing, curing etc.,complete with initial lead upto 50 m and all lifts.**

Note:

If water is to be brought from other place add only lead charges @ 500 ltr / cum.**(Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),****CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)**

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	5200.80000	4.22	21947.38
	Cement for incidentals @ 5 kg / cum	kg	78.80000	4.22	332.54
2	Coarse aggregate 20-10 mm	cum	8.19520	1508.00	12358.36
	Coarse aggregate 10 mm below	cum	4.41280	1098.00	4845.25
3	Fine aggregate (Un-Screened)	cum	7.09200	605.00	4290.66
4	Super Plasticizer	kg	20.80320	63.00	1310.60
5	Use rate of shuttering	sqm	78.80000	327.50	25807.00
	Scaffolding @ of shuttering	50%			12903.50
6	Sundries	LS	1.00000	41.00	41.00
Total cost of Materials				Rs:	83836.29

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	15.76000	595.00	9377.20
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering	sqm	78.80000	146.85	11571.78
	Labour cost for scaffolding @	50%			5785.89
Total cost of Labour				Rs:	44387.29

labour component/unit qty	2816.50
Add contractor's profit and overhead charges	13.615% 383.50
labour component/unit qty (including contractor's profit)	3200.00

ABSTRACT:

A. Cost of Materials	Rs:	83836.29
B. Hire charges of Machinery	Rs:	1889.59
C. Cost of Labour	Rs:	44387.29
	Total	Rs: 130113.17
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	17714.91
Total cost for	15.76 cum	Rs: 147828.08
Rate per cum	(A+B+C+D)/15.76	Rs. 9379.95

IRR-CCDW-2-26 Providing and **laying insitu M- 20** (28 days cube compressive strength not less than 20 N / sqmm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for wearing coat** including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position in alternate panels, levelling, compacting, finishing, curing, packing joints with asphalt mortar etc., complete **with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum. to the data (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement), CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)**

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	5200.80000	4.22	21947.38
	Cement for incidentals @ 5 kg / cum	kg	78.80000	4.22	332.54
2	Coarse aggregate 20-10 mm	cum	8.19520	1508.00	12358.36
	Coarse aggregate 10 mm below	cum	4.41280	1098.00	4845.25
3	Fine aggregate (Un-Screened)	cum	7.09200	605.00	4290.66
4	Super Plasticizer	kg	20.80320	63.00	1310.60
5	Use rate of shuttering	sqm	7.88000	327.50	2580.70
6	Sundries (asphalt mortar etc)	LS	5.00000	41.00	205.00
Total cost of Materials				Rs:	47870.49

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 40 mm dia (petrol)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	2.00000	710.00	1420.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	4.00000	595.00	2380.00
	for conveying concrete	Day	15.76000	595.00	9377.20
	for cleaning/ washing/ curing	Day	2.00000	595.00	1190.00
7	Labour cost for shuttering	sqm	7.88000	146.85	1157.18
Total cost of Labour				Rs:	30086.80

labour component/unit qty 1909.10

Add contractor's profit and overhead charges 13.615% 259.90

labour component/unit qty (including contractor's profit) **2169.00****ABSTRACT:**

A. Cost of Materials	Rs:	47870.49
B. Hire charges of Machinery	Rs:	1889.59
C. Cost of Labour	Rs:	30086.80
	Total	Rs: 79846.88
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	10871.15
Total cost for	15.76 cum	Rs: 90718.03
Rate per cum	(A+B+C+D)/15.76	Rs. 5756.22

IRR-CCDW-2-27 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for troughs** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position,levelling, vibrating, finishing, curing **etc., complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum. to the data (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement), CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)**

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	5200.80000	4.22	21947.38
	Cement for incidentals @ 5 kg / cum	kg	78.80000	4.22	332.54
2	Coarse aggregate 20-10 mm	cum	8.20000	1508.00	12365.60
	Coarse aggregate 10 mm below	cum	4.41280	1098.00	4845.25
3	Fine aggregate (Un-Screened)	cum	7.09200	605.00	4290.66
4	Super Plasticizer	kg	20.80320	63.00	1310.60
5	Use rate of shuttering for 40 uses	sqm	70.92000	327.50	23226.30
	Scaffolding @ of shuttering	25%			5806.58
6	Sundries	LS	0.50000	41.00	20.50
Total cost of Materials				Rs:	74145.41

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Needle vibrator 40 mm dia (diesel)	Hour	8.00000	8.39	67.12
	Fuel / Energy charges	Hour	8.00000	30.14	241.12
Total hire charges of Machinery				Rs:	1889.59

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Needle vibrator	Hour	8.00000	249.86	1998.88
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying	Day	5.00000	595.00	2975.00
	for conveying concrete	Day	15.76000	595.00	9377.20
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering	sqm	70.92000	146.85	10414.60
	Labour cost for scaffolding @	25%			2603.65
Total cost of Labour				Rs:	41237.87

labour component/unit qty	2616.60
Add contractor's profit and overhead charges	13.615% 356.30
labour component/unit qty (including contractor's profit)	2972.90

ABSTRACT:

A. Cost of Materials	Rs:	74145.41
B. Hire charges of Machinery	Rs:	1889.59
C. Cost of Labour	Rs:	41237.87
	Total	Rs: 117272.87
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	15966.7
Total cost for	15.76 cum	Rs: 133239.57
Rate per cum	(A+B+C+D)/15.76	Rs. 8454.29

IRR-CCDW-3 **FOUNDATION WELL SINKING WORKS :**IRR-CCDW-3-1 **Sinking RCC wells vertically for foundation of piers and abutments in all kinds of soil, sand**

DATA: Unit = Running meter

Taking output = 1m

diameter of well = 6.00m

(i) Depth below bed level upto 3.0m

Rate of sinking = 0.50 m /hour

a) Labour

0.12 Mate (Mason Cl- II)	640.00 day	76.80
1.00 Sinker (skilled)	710.00 day	710.00
2.00 Sinking helper (Semi skilled)	595.00 day	1190.00
sub total (a)		1976.80

b) Machinery

2.00 Hire & running charges of crane with grab bucket of 0.75 cum capacity and accessories.	552.23 hour	1104.46
Fuel Charges	506.34 hour	1012.68
Crew Charges	273.98 hour	547.96
Consumables in sinking @ 10% of machinery charges		266.51
sub total (b)		2931.61
sub total (a+b)		4908.41
c) Add for Contractor's profit and overhead charges on (A+B)	13.615%	668.28

Rate per metre = (a+b+c)/1.0

or say (Rate upto 3.0m for 6.0 m well sinking)

labour component/unit qty	2524.80
Contractor's profit and overhead charges	13.615% 343.80
labour component/unit qty(including contractor's profit)	2868.60

- (ii) Beyond 3m and upto 10m depth
Rate of sinking = 0.33 m per hour.

a) Labour

0.15 Mate (Mason Cl- II)	640.00 day	96.00
1.25 Sinker (skilled)	710.00 day	887.50
2.50 Sinking helper (Semi skilled)	595.00 day	1487.50
sub total (a)		2471.00

b) Machinery

3.00 Hire & running charges of crane with grab bucket of 0.75 cum capacity and accessories.	552.23 hour	1656.69
Fuel Charges	506.34 hour	1519.02
Crew Charges	273.98 hour	821.94
Consumables in sinking @ 10% of machinery charges		399.77
sub total (b)		4397.42
sub total (a+b)		6868.42
c) Add for Contractor's profit and overhead charges on (A+B)	13.615%	935.14

Rate per metre = (a+b+c)

or say (Rate for 3.0m to 10m well sinking)

labour component/unit qty	3292.90
Contractor's profit and overhead charges	13.615% 448.30
labour component/unit qty(including contractor's profit)	3741.20

IRR-CCDW-3-2 **Filling foundation wells with sand in layers of 25 to 30 cm** and compacting by watering, ramming as directed including cost of all materials, machinery, labour etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSISUNIT : **15.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Sand for filling	cum	15.75000	460.00	7245.00
				0.00	0.00
Total cost of Materials				Rs:	7245.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.25000	775.00	193.75
2	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	2573.75

labour component/unit qty	171.60
Add contractor's profit and overhead charges	13.615% 23.40
labour component/unit qty (including contractor's profit)	195.00

ABSTRACT:

A. Cost of Materials		Rs:	7245.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	2573.75
		Total	Rs: 9818.75
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	1336.82
Total cost for	15.00 cum	Rs:	11155.57
Rate per cum	(A+B+C+D)/15.0	Rs.	743.70

IRR-CCDW-4 **MASONRY WORKS :**

IRR-CCDW-4-1 Providing and **constructing un-coursed rubble stone masonry** with approved stones in **CM 1 : 4** proportion for **sub-structure portions of return walls / abutments** etc., including cost of all materials, machinery, labour, scaffolding, cleaning, packing cement mortar, wedging stone chips, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 143 kg / cum of masonry, rubble stones : 0.85cum, FA : 0.40 cum, Stone Chips : 0.15 cum)

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	1430.00000	4.22	6034.60
2	Rubble stones	cum	8.50000	395.00	3357.50
3	Stone chips	cum	1.50000	466.00	699.00
4	Sand (Screened)	cum	4.00000	728.00	2912.00
Total cost of Materials				Rs:	13003.10

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
Total hire charges of Machinery				Rs:	1027.42

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Water tanker	Hour	1.00000	273.98	273.98
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	work inspector	Day	1.00000	775.00	775.00
4	Mason Class-I	Day	1.00000	710.00	710.00
5	Mason Class-II	Day	2.00000	640.00	1280.00
6	mazdoor				
	for conveying rubble stones	Day	4.00000	595.00	2380.00
	for preparing mortar	Day	2.00000	595.00	1190.00
	for loading mortar pans	Day	1.00000	595.00	595.00
	for laying & packing mortar	Day	3.00000	595.00	1785.00
	for washing rubble / finishing / curing	Day	1.00000	595.00	595.00
	for conveying mortar / chips	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	12050.72

labour component/unit qty	1205.10
Add contractor's profit and overhead charges	13.615% 164.10
labour component/unit qty (including contractor's profit)	1369.20

ABSTRACT:

A. Cost of Materials		Rs:	13003.10
B. Hire charges of Machinery		Rs:	1027.42
C. Cost of Labour		Rs:	12050.72
		Total	Rs: 26081.24
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	3550.96
Total cost for	10.00 cum	Rs:	29632.2
Rate per cum	(A+B+C+D)/10.0	Rs.	2963.22

IRR-CCDW-4-2 Providing and **constructing un-coursed rubble stone masonry** with approved stones in **CM 1 : 4** proportion for **super-structure portions of return walls / abutments** etc., including cost of all materials, machinery, labour, scaffolding, cleaning, packing cement mortar, wedging stone chips, curing etc., complete **with initial lead upto 50 m and all lifts.**

(Cement content: 143 kg / cum of masonry, rubble stones : 0.85cum, FA : 0.40 cum, Stone Chips : 0.15 cum)

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	1430.00000	4.22	6034.60
2	Rubble stones	cum	8.50000	395.00	3357.50
3	Stone chips	cum	1.50000	466.00	699.00
4	Sand (Screened)	cum	4.00000	728.00	2912.00
TOTAL				Rs:	13003.10
Add for scaffolding @ 2.5%				Rs:	325.08
Total cost of Materials				Rs:	13328.18

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
Total hire charges of Machinery				Rs:	1027.42

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Water tanker	Hour	1.00000	273.98	273.98
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	work inspector	Day	1.00000	775.00	775.00
4	Mason Class-I	Day	1.00000	710.00	710.00
5	Mason Class-II	Day	2.00000	640.00	1280.00
6	mazdoor				
	for conveying rubble stones	Day	4.00000	595.00	2380.00
	for preparing mortar	Day	2.00000	595.00	1190.00
	for loading mortar pans	Day	1.00000	595.00	595.00
	for laying & packing mortar	Day	3.00000	595.00	1785.00
	for washing rubble / finishing / curing	Day	1.00000	595.00	595.00
	for conveying mortar / chips	Day	4.00000	595.00	2380.00
TOTAL				Rs:	12050.72
Add for labour for scaffolding @ 2.5%				Rs:	301.27
Total cost of Labour				Rs:	12351.99

labour component/unit qty 1235.20

Add contractor's profit and overhead charges 13.615% 168.20

labour component/unit qty (including contractor's profit) **1403.40****ABSTRACT:**

A. Cost of Materials Rs: 13328.18

B. Hire charges of Machinery Rs: 1027.42

C. Cost of Labour Rs: 12351.99

Total Rs: 26707.59

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 3636.24

Total cost for 10.00 cum Rs: **30343.83****Rate per cum (A+B+C+D)/10.0 Rs: **3034.38****

IRR-CCDW-4-3 Providing and **constructing coursed rubble masonry second sort** in **CM 1:4** proportion with stones from approved source including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, finishing, curing etc., complete with initial lead upto 50 m and initial lift upto 3m.

(Cement content: 133 kg / cum of masonry, rubble stones : 0.45cum, FA : 0.35 cum, Stone Chips : 0.15 cum, Khandki stones 25 x 25 x 30 cm : 180 Nos, Header stones 25 x 25x 45 cm : 60 Nos)

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	1330.00000	4.22	5612.60
2	Header stones 25x25x45 cm	Nos	60.00000	50.00	3000.00
3	Khandki stones 25x25x30 cm	Nos	180.00000	23.00	4140.00
4	Rubble stones	cum	4.50000	395.00	1777.50
5	Stone chips	cum	1.50000	466.00	699.00
6	Sand (Screened)	cum	3.50000	728.00	2548.00
			TOTAL	Rs:	17777.10
	Add for scaffolding materials @		2.5%	Rs:	444.43
	Total cost of Materials			Rs:	18221.53

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
	Total hire charges of Machinery			Rs:	1027.42

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Water tanker	Hour	1.00000	273.98	273.98
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	work inspector	Day	1.00000	775.00	775.00
4	Stone chiseller CI -II	Day	3.00000	640.00	1920.00
5	Mason Class-I	Day	1.00000	710.00	710.00
6	Mason Class-II	Day	2.00000	640.00	1280.00
7	mazdoor				
	for conveying stones / rubble	Day	4.00000	595.00	2380.00
	for preparation of mortar	Day	3.00000	595.00	1785.00
	for loading mortar pans	Day	1.00000	595.00	595.00
	for laying & packing mortar	Day	3.00000	595.00	1785.00
	for washing rubble / finishing / curing	Day	1.00000	595.00	595.00
	for conveying mortar / chips	Day	2.00000	595.00	1190.00
			TOTAL	Rs:	13375.72
	Add for labour for scaffolding @		2.5%	Rs:	334.39
	Total cost of Labour			Rs:	13710.11

labour component/unit qty	1371.00
Add contractor's profit and overhead charges	13.615% 186.70
labour component/unit qty (including contractor's profit)	1557.70

ABSTRACT:

A. Cost of Materials	Rs:	18221.53
B. Hire charges of Machinery	Rs:	1027.42
C. Cost of Labour	Rs:	13710.11
	Total	Rs: 32959.06
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	4487.38
Total cost for	10.00 cum	Rs: 37446.44
Rate per cum	(A+B+C+D)/10.0	Rs. 3744.64

IRR-CCDW-4-4 Providing and **constructing coursed rubble masonry first sort** in **CM 1:4** proportion with stones from approved source including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, finishing, curing etc., complete with initial lead upto 50 m and initial lift upto 3 m.

(Cement content: 133 kg / cum of masonry, rubble stones : 0.45cum, FA : 0.35 cum, Stone Chips : 0.15 cum, Khandki stones 25 x 25 x 30 cm : 180 Nos, Header stones 25 x 25x 45 cm : 60 Nos)

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	1330.00000	4.22	5612.60
2	Header stones 25x25x45 cm	Nos	60.00000	50.00	3000.00
3	Khandki stones 25x25x30 cm	Nos	180.00000	23.00	4140.00
4	Rubble stones	cum	4.50000	395.00	1777.50
5	Stone chips	cum	1.50000	466.00	699.00
6	Sand (Screened)	cum	3.50000	728.00	2548.00
TOTAL				Rs:	17777.10
Add for scaffolding materials @ 2.5%				Rs:	444.43
Total cost of Materials				Rs:	18221.53

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
Total hire charges of Machinery				Rs:	1027.42

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Water tanker	Hour	1.00000	273.98	273.98
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	work inspector	Day	1.00000	775.00	775.00
4	Stone chiseller CI -II	Day	6.00000	640.00	3840.00
5	Mason Class-I	Day	1.00000	710.00	710.00
6	Mason Class-II	Day	2.00000	640.00	1280.00
7	mazdoor				
8	for conveying rubble/ stones	Day	4.00000	595.00	2380.00
	for preparation of mortar	Day	3.00000	595.00	1785.00
	for loading mortar pans	Day	1.00000	595.00	595.00
	for laying & packing mortar	Day	3.00000	595.00	1785.00
	for washing rubble / finishing / curing	Day	1.00000	595.00	595.00
	for conveying mortar / chips	Day	2.00000	595.00	1190.00
TOTAL				Rs:	15295.72
Add for labour for scaffolding @ 2.5%				Rs:	382.39
Total cost of Labour				Rs:	15678.11

labour component/unit qty 1567.80

Add contractor's profit and overhead charges 13.615% 213.50

labour component/unit qty (including contractor's profit) **1781.30****ABSTRACT:**

A. Cost of Materials	Rs:	18221.53
B. Hire charges of Machinery	Rs:	1027.42
C. Cost of Labour	Rs:	15678.11
	Total Rs:	34927.06
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	4755.32
Total cost for	10.00 cum Rs:	39682.38
Rate per cum	(A+B+C+D)/10.0 Rs:	3968.24

IRR-CCDW-4-5 **Providing cement mortar pointing to coursed rubble face stone masonry in CM 1 : 2**
 proportion by volume including raking and cleaning joints for 50 mm depth, pressing cement mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	456.00000	4.22	1924.32
2	Sand (Screened)	cum	0.75000	728.00	546.00
TOTAL				Rs:	2470.32
Add for scaffolding / ramps etc @ 2.5%				Rs:	61.76
Total cost of Materials				Rs:	2532.08

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- I	Day	10.00000	710.00	7100.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs:	13825.00

labour component/unit qty 138.30
 Add contractor's profit and overhead charges 13.615% 18.80
 labour component/unit qty (including contractor's profit) **157.10**

ABSTRACT:

A. Cost of Materials	Rs:	2532.08
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	13825.00
Total	Rs:	16357.08
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	2227.02
Total cost for	100.00 sqm	Rs: 18584.10
Rate per sqm	(A+B+C+D)/100.0	Rs. 185.84

IRR-CCDW-4-6 **Providing cement mortar pointing to coursed rubble face stone masonry in CM 1 : 3**
 proportion by volume including raking and cleaning joints for 50 mm depth, pressing cement mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	322.00000	4.22	1358.84
2	Sand (Screened)	cum	0.75000	728.00	546.00
TOTAL				Rs:	1904.84
Add for scaffolding / ramps etc @				2.5%	Rs: 47.62
Total cost of Materials				Rs:	1952.46

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- I	Day	10.00000	710.00	7100.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	10.00000	595.00	5950.00
Total cost of Labour				Rs:	13825.00

labour component/unit qty 138.30
 Add contractor's profit and overhead charges 13.615% 18.80
 labour component/unit qty (including contractor's profit) **157.10**

ABSTRACT:

A. Cost of Materials	Rs:	1952.46
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	13825.00
Total	Rs:	15777.46
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	2148.1
Total cost for	100.00 sqm	Rs: 17925.56
Rate per sqm	(A+B+C+D)/100.0	Rs. 179.26

IRR-CCDW-4-7 **Providing 12 mm thick plastering in cement mortar 1:3** proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **100.00** sqm**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	629.00000	4.22	2654.38
2	Sand (Screened)	cum	1.32000	728.00	960.96
TOTAL				Rs:	3615.34
Add for scaffolding / ramps etc @				2.5%	Rs: 90.38
Total cost of Materials				Rs:	3705.72

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- I	Day	10.00000	710.00	7100.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	20.00000	595.00	11900.00
Total cost of Labour				Rs:	19775.00

labour component/unit qty 197.80

Add contractor's profit and overhead charges 13.615% 26.90

labour component/unit qty (including contractor's profit) **224.70****ABSTRACT:**

A. Cost of Materials Rs: 3705.72

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 19775.00

Total Rs: 23480.72

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 3196.9

Total cost for 100.00 sqm Rs: **26677.62****Rate per sqm** (A+B+C+D)/100.0 Rs: **266.78**

IRR-CCDW-4-8 **Providing 12 mm thick plastering in cement mortar 1:4** proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **100.00** sqm**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	472.00000	4.22	1991.84
2	Sand (Screened)	cum	1.32000	728.00	960.96
TOTAL				Rs:	2952.80
Add for scaffolding / ramps etc @				2.5%	Rs: 73.82
Total cost of Materials				Rs:	3026.62

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- I	Day	10.00000	710.00	7100.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	20.00000	595.00	11900.00
Total cost of Labour				Rs:	19775.00

labour component/unit qty	197.80
Add contractor's profit and overhead charges	13.615% 26.90
labour component/unit qty (including contractor's profit)	<u>224.70</u>

ABSTRACT:

A. Cost of Materials		Rs:	3026.62
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	19775.00
		Total	Rs: 22801.62
D. Add for contractor's profit and overheads on (A+B+C)		13.615% Rs:	3104.44
Total cost for	100.00 sqm	Rs:	<u>25906.06</u>
Rate per sqm	(A+B+C+D)/100.0	Rs.	<u>259.06</u>

IRR-CCDW-4-9 **Providing 20 mm thick plastering in cement mortar 1:3** proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **100.00** sqm**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	1050.00000	4.22	4431.00
2	Sand (Screened)	cum	2.20000	728.00	1601.60
			TOTAL	Rs:	6032.60
	Add for scaffolding / ramps etc @			2.5%	Rs: 150.82
			Total cost of Materials	Rs:	6183.42

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
			Total hire charges of Machinery	Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- I	Day	15.00000	710.00	10650.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	25.00000	595.00	14875.00
			Total cost of Labour	Rs:	26300.00

labour component/unit qty	263.00
Add contractor's profit and overhead charges	13.615% 35.80
labour component/unit qty (including contractor's profit)	<u>298.80</u>

ABSTRACT:

A. Cost of Materials		Rs:	6183.42
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	26300.00
		Total	Rs: 32483.42
D. Add for contractor's profit and overheads on (A+B+C)		13.615% Rs:	4422.62
Total cost for	100.00 sqm	Rs:	<u>36906.04</u>
Rate per sqm	(A+B+C+D)/100.0	Rs.	<u>369.06</u>

IRR-CCDW-4-10 **Providing 20 mm thick plastering in cement mortar 1:4** proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **100.00** sqm**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	788.00000	4.22	3325.36
2	Sand (Screened)	cum	2.20000	728.00	1601.60
			TOTAL	Rs:	4926.96
	Add for scaffolding / ramps etc @			2.5%	Rs: 123.17
			Total cost of Materials	Rs:	5050.13

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- I	Day	15.00000	710.00	10650.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	25.00000	595.00	14875.00
Total cost of Labour				Rs:	26300.00

labour component/unit qty 263.00

Add contractor's profit and overhead charges 13.615% 35.80

labour component/unit qty (including contractor's profit) **298.80****ABSTRACT:**

A. Cost of Materials	Rs:	5050.13
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	26300.00
Total	Rs:	31350.13
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	4268.32
Total cost for	100.00 sqm	Rs: 35618.45
Rate per sqm	(A+B+C+D)/100.0	Rs. 356.18

IRR-CCDW-5 **COPING & RAILING WORKS :**

IRR-CCDW-5-1 Providing and fixing **10 cm thick roughly dressed burnt stone slabs for coping** set in **CM 1 : 6** proportion by volume with pointing to joints in **CM 1 : 3** proportion by volume including cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto **50 m and all lifts.**
(Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm,
Burnt stone slab 10 cm thick 1.05 sqm/ sqm)

DATA:

RATE ANALYSISUNIT : **10.00** sqm**A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	75.00000	4.22	316.50
2	Sand (Screened)	cum	0.30000	728.00	218.40
3	Burnt stone slab 10 cm thick	sqm	10.50000	368.00	3864.00
Total cost of Materials				Rs:	4398.90

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	1.00000	640.00	640.00
2	Stone chiseller Cl- II	Day	1.00000	640.00	640.00
3	work inspector	Day	0.50000	775.00	387.50
4	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	2857.50

labour component/unit qty 285.80

Add contractor's profit and overhead charges 13.615% 38.90

labour component/unit qty (including contractor's profit) **324.70****ABSTRACT:**

A. Cost of Materials	Rs:	4398.90
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	2857.50
Total	Rs:	7256.40
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	987.96
Total cost for	10.00 sqm	Rs: 8244.36
Rate per sqm	(A+B+C+D)/10.0	Rs. 824.44

IRR-CCDW-5-2 Providing and fixing **10 cm thick one line dressed burnt stone slabs for coping** set in
CM 1: 6 proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including
 cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto
50 m and all lifts.
(Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm, Burnt stone slab 10 cm
thick 1.05 sqm/ sqm)

DATA:

RATE ANALYSISUNIT : **10.00 sqm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	75.00000	4.22	316.50
2	Sand (Screened)	cum	0.30000	728.00	218.40
3	Burnt stone slab 10 cm thick	sqm	10.50000	368.00	3864.00
Total cost of Materials				Rs:	4398.90

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason CI- II	Day	1.00000	640.00	640.00
2	Stone chiseller CI- I	Day	4.00000	700.00	2800.00
3	work inspector	Day	0.50000	775.00	387.50
4	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	5017.50

labour component/unit qty

501.80

Add contractor's profit and overhead charges

13.615% 68.30

labour component/unit qty (including contractor's profit)

570.10**ABSTRACT:**

A. Cost of Materials

Rs: 4398.90

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 5017.50

Total Rs: 9416.40

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs: 1282.04

Total cost for

10.00 sqm Rs: **10698.44****Rate per sqm**(A+B+C+D)/10.0 Rs: **1069.84**

IRR-CCDW-5-3 Providing and fixing **10 cm thick two line dressed burnt stone slabs for coping** set in
CM 1: 6 proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including
 cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto
50 m and all lifts.
(Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm, Burnt stone slab 10 cm
thick 1.05 sqm/ sqm)

DATA:

RATE ANALYSISUNIT : **10.00 sqm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	75.00000	4.22	316.50
2	Sand (Screened)	cum	0.30000	728.00	218.40
3	Burnt stone slab 10 cm thick	sqm	10.50000	368.00	3864.00
Total cost of Materials				Rs:	4398.90

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	1.00000	640.00	640.00
2	Stone chiseller Cl-I	Day	8.00000	700.00	5600.00
3	work inspector	Day	0.50000	775.00	387.50
4	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	7817.50
labour component/unit qty			781.80		
Add contractor's profit and overhead charges			13.615%	106.40	
labour component/unit qty (including contractor's profit)				888.20	

ABSTRACT:

A. Cost of Materials	Rs:	4398.90
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	7817.50
	Total	Rs: 12216.40
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1663.26
Total cost for	10.00 sqm	Rs: 13879.66
Rate per sqm	(A+B+C+D)/10.0	Rs. 1387.97

IRR-CCDW-5-4 Providing and **laying insitu M-15** (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete using **20 mm down size** approved clean, hard, graded aggregates for coping slab including cost of all materials, machinery, labour, formwork, cleaning surface, batching, mixing, placing in position, levelling, compacting, finishing, curing etc., **complete with initial lead upto 50 m and initial lift upto 3 m.**
(Cement content: 300 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **14.67 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement for mix	kg	4401.00000	4.22	18572.22
	Cement for incidentals @ 5 kg / cum	kg	73.35000	4.22	309.54
2	Coarse aggregate 20-10 mm	cum	7.62840	1508.00	11503.63
	Coarse aggregate 10 mm below	cum	4.10760	1098.00	4510.14
3	Fine aggregate (Un-Screened)	cum	6.60150	605.00	3993.91
4	Super Plasticizer	kg	17.60400	63.00	1109.05
5	Use rate of shuttering	sqm	80.68500	327.50	26424.34
6	Sundries	sqm	1.00000	41.00	41.00
Total cost of Materials				Rs:	66463.83

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00000	54.70	437.60
	Fuel / Energy charges	Hour	8.00000	133.95	1071.60
2	5 hp pump (diesel)	Hour	0.50000	10.34	5.17
	Fuel / Energy charges	Hour	0.50000	133.95	66.98
3	Water tanker 8000 ltr	Hour	1.00000	448.93	448.93
	Fuel / Energy charges	Hour	1.00000	506.34	506.34
Total hire charges of Machinery				Rs:	2536.62

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Concrete mixer	Hour	8.00000	347.10	2776.80
2	Crew for Pump	Hour	0.50000	173.47	86.74
3	Crew for Water tanker	Hour	1.00000	273.98	273.98
4	Mason Class-I	Day	1.00000	710.00	710.00
5	work inspector	Day	1.00000	775.00	775.00
6	mazdoor				
	for batching materials	Day	11.00000	595.00	6545.00
	for loading mortar pans	Day	4.00000	595.00	2380.00
	for laying and tamping	Day	3.00000	595.00	1785.00
	for conveying concrete	Day	14.67000	595.00	8728.65
	for cleaning/ washing/ curing	Day	1.00000	595.00	595.00
7	Labour cost for shuttering/scaffolding	sqm	80.68500	146.85	11848.59
Total cost of Labour				Rs:	36504.76

labour component/unit qty	2488.40
Add contractor's profit and overhead charges	13.615% 338.80
labour component/unit qty (including contractor's profit)	<u>2827.20</u>

ABSTRACT:

A. Cost of Materials		Rs:	66463.83
B. Hire charges of Machinery		Rs:	2536.62
C. Cost of Labour		Rs:	36504.76
	Total	Rs:	105505.21
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	14364.53
Total cost for	14.67 cum	Rs:	<u>119869.74</u>
Rate per cum	(A+B+C+D)/14.67	Rs.	<u>8171.08</u>

IRR-CCDW-5-5 Providing and **constructing protective railing** consisting of in-situ railing posts of size 15 x 15 cm at bottom, 10 x 10 cm at top and 75 cm height at 2 m centre to centre in **M-20** grade concrete using **20 mm down size** graded aggregates and with each post reinforced by 4 Nos. of 8 mm dia main bars embedded in kerb concrete for a depth of 40 cm and 5 Nos. of 6 mm dia. stirrups including fixing 3 rows of 40 mm dia. GI pipes with one coat of red oxide primer and two coats of synthetic enamel paint, cost of all materials, machinery, labour, formwork, finishing, curing etc., complete **with lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **10.00 Rm****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	30.00000	4.22	126.60
2	20-10 mm coarse aggregate	cum	0.04000	1508.00	60.32
3	10-4.75 mm coarse aggregate	cum	0.02000	1098.00	21.96
4	Fine aggregate (Un-Screened)	cum	0.04000	605.00	24.20
5	Reinforcement steel	kg	16.390240	59.00	967.02
6	40 mm dia GI pipes B class	Rm	30.00000	236.00	7080.00
7	Use rate of shuttering	sqm	3.00000	327.50	982.50
8	Sundries (paints/ binding wire etc)	LS	4.00000	41.00	164.00
Total cost of Materials				Rs:	9426.60

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Class I	Day	0.50000	710.00	355.00
2	Bar bender	Day	0.50000	850.00	425.00
3	work inspector	Day	0.50000	775.00	387.50
4	mazdoor	Day	1.50000	595.00	892.50
5	Painter Cl- II	Day	0.50000	640.00	320.00
6	Fitter shuttering	Day	0.50000	640.00	320.00
Total cost of Labour				Rs:	2700.00

labour component/unit qty	270.00
Add contractor's profit and overhead charges	13.615% 36.80
labour component/unit qty (including contractor's profit)	<u>306.80</u>

ABSTRACT:

A. Cost of Materials		Rs:	9426.60
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	2700.00
	Total	Rs:	12126.60
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	1651.04
Total cost for	10.00 Rm	Rs:	<u>13777.64</u>
Rate per Rm	(A+B+C+D)/10.0	Rs.	<u>1377.76</u>

IRR-CCDW-6 **HUME PIPE LAYING & JOINTING WORKS :**

IRR-CCDW-6-1 Laying and jointing 300 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 9.9 kg / joint, FA : 0.01cum/joint, Hemp Yarn : 0.091kg/joint)

DATA:

RATE ANALYSIS

UNIT : 10.00 Joints

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	99.00000	4.22	417.78
2	Sand (Screened)	cum	0.10000	728.00	72.80
3	Hemp yarn	kg	0.91000	73.00	66.43
Total cost of Materials				Rs:	557.01

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	2.00000	640.00	1280.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	3840.00

labour component/unit qty384.00

Add contractor's profit and overhead charges13.615%52.30

labour component/unit qty (including contractor's profit)436.30

ABSTRACT:

A. Cost of Materials

B. Hire charges of Machinery

C. Cost of Labour

Total

D. Add for contractor's profit and overheads on (A+B+C)

Total cost for

Rate per joint

Rs: 557.01

Rs: 0.00

Rs: 3840.00

Rs: 4397.01

13.615% Rs: 598.65

Rs: 4995.66

Rs. 499.57

10.00 Joints

(A+B+C+D)/10.0

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-2 Laying and jointing 450 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 17.4 kg / joint, FA : 0.022cum/joint, Hemp Yarn : 0.127kg/joint)

DATA:

RATE ANALYSIS			UNIT : 10.00 Joints		
A. MATERIALS:					
SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	174.00000	4.22	734.28
2	Sand (Screened)	cum	0.22000	728.00	160.16
3	Hemp yarn	kg	1.27000	73.00	92.71
Total cost of Materials				Rs:	987.15

B. MACHINERY:					
SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	2.00000	640.00	1280.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	3840.00

labour component/unit qty 384.00

Add contractor's profit and overhead charges 13.615% 52.30

labour component/unit qty (including contractor's profit) **436.30****ABSTRACT:**

A. Cost of Materials	Rs:	987.15
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	3840.00
Total	Rs:	4827.15
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	657.22
Total cost for	10.00 Joints	Rs:
Rate per joint	(A+B+C+D)/10.0	Rs: 548.44

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-3 Laying and **jointing 600 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2**
proportion by volume including cost of all materials (excluding pipes and collars), machinery,
labour, aligning, packing joints with hemp, finishing, curing etc., complete **with initial lead upto**
50 m and all lifts.
(Cement content: 24.8 kg / joint, FA : 0.025cum/joint, Hemp Yarn : 0.22kg/joint)

DATA: **RATE ANALYSIS** UNIT : **10.00 Joints**

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	248.00000	4.22	1046.56
2	Sand (Screened)	cum	0.25000	728.00	182.00
3	Hemp yarn	kg	2.20000	73.00	160.60
Total cost of Materials				Rs:	1389.16

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	2.50000	640.00	1600.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	4755.00

labour component/unit qty 475.50

Add contractor's profit and overhead charges 13.615% 64.70

labour component/unit qty (including contractor's profit) **540.20****ABSTRACT:**

A. Cost of Materials	Rs:	1389.16
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	4755.00
Total	Rs:	6144.16
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	836.53
Total cost for	10.00 Joints	Rs:
Rate per joint	(A+B+C+D)/10.0	Rs: 698.07

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-4 Laying and jointing 700 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 32.1 kg / joint, FA : 0.031cum/joint, Hemp Yarn : 0.25kg/joint)

DATA: RATE ANALYSIS UNIT : 10.00 Joints

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	321.00000	4.22	1354.62
2	Sand (Screened)	cum	0.31000	728.00	225.68
3	Hemp yarn	kg	2.50000	73.00	182.50
Total cost of Materials				Rs:	1762.80

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	2.50000	640.00	1600.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	4755.00

labour component/unit qty 475.50

Add contractor's profit and overhead charges 13.615% 64.70

labour component/unit qty (including contractor's profit) **540.20**

ABSTRACT:

A. Cost of Materials Rs: 1762.80

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 4755.00

Total Rs: 6517.80

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 887.4

Total cost for 10.00 Joints Rs: **7405.2**

Rate per joint (A+B+C+D)/10.0 Rs: **740.52**

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-5 Laying and jointing 800 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 39.6 kg / joint, FA : 0.039cum/joint, Hemp Yarn : 0.31kg/joint)

DATA: RATE ANALYSIS UNIT : 10.00 Joints

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	396.00000	4.22	1671.12
2	Sand (Screened)	cum	0.39000	728.00	283.92
3	Hemp yarn	kg	3.10000	73.00	226.30
Total cost of Materials				Rs:	2181.34

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	3.00000	640.00	1920.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	5.00000	595.00	2975.00
Total cost of Labour				Rs:	5670.00

labour component/unit qty	567.00
Add contractor's profit and overhead charges	13.615% 77.20
labour component/unit qty (including contractor's profit)	644.20

ABSTRACT:

A. Cost of Materials	Rs:	2181.34
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	5670.00
Total	Rs:	7851.34
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1068.96
Total cost for	10.00 Joints	Rs: 8920.3
Rate per joint	(A+B+C+D)/10.0	Rs. 892.03

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-6 Laying and jointing 900 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 44.6 kg / joint, FA : 0.045cum/joint, Hemp Yarn : 0.34kg/joint)

DATA: Consider 10 joints for analysis.
Cement : 446 kg Sand : 3.40 kg 0.45 cum
Hemp yarn : 3.40 kg
3 Masons & 4 mazdoors considered for 10 joints.
1mazdoor for curing @ daily 1 hour for one week.

DATA: **RATE ANALYSIS** UNIT : **10.00** Joints

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	446.00000	4.22	1882.12
2	Sand (Screened)	cum	0.45000	728.00	327.60
3	Hemp yarn	kg	3.40000	73.00	248.20
Total cost of Materials				Rs:	2457.92

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Null		0.000000	0.00	0.00
	(Manual mixing)		0.000000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	3.00000	640.00	1920.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	5.00000	595.00	2975.00
Total cost of Labour				Rs:	5670.00

labour component/unit qty	567.00
Add contractor's profit and overhead charges	13.615% 77.20
labour component/unit qty (including contractor's profit)	644.20

ABSTRACT:

A. Cost of Materials	Rs:	2457.92
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	5670.00
Total	Rs:	8127.92
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1106.62
Total cost for	10.00 Joints	Rs: 9234.54
Rate per joint	(A+B+C+D)/10.0	Rs. 923.45

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-7 Laying and jointing 1000 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 49.5 kg / joint, FA : 0.05cum/joint, Hemp Yarn : 0.377kg/joint)

DATA: RATE ANALYSIS UNIT : 10.00 Joints

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	495.00000	4.22	2088.90
2	Sand (Screened)	cum	0.50000	728.00	364.00
3	Hemp yarn	kg	3.77000	73.00	275.21
Total cost of Materials				Rs:	2728.11

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1.00000	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	3.00000	640.00	1920.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	6265.00

labour component/unit qty 626.50

Add contractor's profit and overhead charges 13.615% 85.30

labour component/unit qty (including contractor's profit) 711.80

ABSTRACT:

A. Cost of Materials	Rs:	2728.11
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	6265.00
Total	Rs:	8993.11
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1224.41
Total cost for	Rs:	10217.52
Rate per joint	(A+B+C+D)/10.0	Rs: 1021.75

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-8 Laying and jointing 1100 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 56.9 kg / joint, FA : 0.058cum/joint, Hemp Yarn : 0.415kg/joint)

DATA: RATE ANALYSIS UNIT : 10.00 Joints

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	569.00000	4.22	2401.18
2	Sand (Screened)	cum	0.58000	728.00	422.24
3	Hemp yarn	kg	4.15000	73.00	302.95
Total cost of Materials				Rs:	3126.37

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	3.00000	640.00	1920.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	6265.00

labour component/unit qty	626.50
Add contractor's profit and overhead charges	13.615% 85.30
labour component/unit qty (including contractor's profit)	711.80

ABSTRACT:

A. Cost of Materials	Rs:	3126.37
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	6265.00
Total	Rs:	9391.37
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1278.64
Total cost for	10.00 Joints	Rs:
Rate per joint	(A+B+C+D)/10.0	Rs:
		10670.01
		1067.00

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-9 Laying and **jointing 1200 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2**
proportion by volume including cost of all materials (excluding pipes and collars), machinery,
labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto
50 m and all lifts.
(Cement content: 66.8 kg / joint, FA : 0.069cum/joint, Hemp Yarn : 0.453kg/joint)

DATA: **RATE ANALYSIS** UNIT : **10.00 Joints**

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement	kg	668.00000	4.22	2818.96
2	Sand (Screened)	cum	0.69000	728.00	502.32
3	Hemp yarn	kg	4.53000	73.00	330.69
Total cost of Materials				Rs:	3651.97

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	4.00000	640.00	2560.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	7.00000	595.00	4165.00
Total cost of Labour				Rs:	7500.00

labour component/unit qty	750.00
Add contractor's profit and overhead charges	13.615% 102.10
labour component/unit qty (including contractor's profit)	852.10

ABSTRACT:

A. Cost of Materials	Rs:	3651.97
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	7500.00
Total	Rs:	11151.97
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1518.34
Total cost for	10.00 Joints	Rs:
Rate per joint	(A+B+C+D)/10.0	Rs:
		12670.31
		1267.03

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-7 **BACK FILLING & OTHER WORKS :**

IRR-CCDW-7-1 **Providing rubble / boulder and sand filling behind abutment and return walls** in layers including cost of all materials, machinery, labour, watering, ramming etc., complete with initial lead upto 50 m and initial lift upto 3 m.

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rubble / Boulder	cum	10.00000	395.00	3950.00
2	Sand for filling	cum	4.00000	460.00	1840.00
Total cost of Materials				Rs:	5790.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.50000	775.00	387.50
2	Mason Cl II	Day	1.00000	640.00	640.00
3	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	3407.50

labour component/unit qty

340.80

Add contractor's profit and overhead charges

13.615% 46.40

labour component/unit qty (including contractor's profit)

387.20**ABSTRACT:**

A. Cost of Materials

Rs: 5790.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 3407.50

Total Rs: 9197.50

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs: 1252.24

Total cost for

10.00 cum

Rs: **10449.74****Rate per cum**

(A+B+C+D)/10.0

Rs. **1044.97**

IRR-CCDW-7-2 **Providing and filling murrum / gravelly soil (CNS soil) for foundation or around pipes** including breaking clods, spreading in layers of 10 to 15 cm, watering, compaction by earth masters to achieve density control of not less than 95 percent etc., complete with lead upto 50 m and all lifts.

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Murum	cum	12.00000	250.00	3000.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	3000.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Nil		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cartman with double bullock cart	Day	0.50000	710.00	355.00
2	work inspector	Day	0.50000	775.00	387.50
3	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	4312.50

labour component/unit qty	431.30
Add contractor's profit and overhead charges	13.615% 58.70
labour component/unit qty (including contractor's profit)	<u>490.00</u>

ABSTRACT:

A. Cost of Materials		Rs:	3000.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	4312.50
		Total	Rs: 7312.50
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	995.6
Total cost for	10.00 cum	Rs:	<u>8308.1</u>
Rate per cum	(A+B+C+D)/10.0	Rs.	<u>830.81</u>

IRR-CCDW-7-3 Providing and filling murum / gravely soil (CNS soil) for foundation or above pipes including breaking clods, spreading in layers of 10 to 15 cm, watering, compaction by power roller to achieve density control of not less than 98 percent etc., complete with lead upto 50 m and all lifts.

DATA:

RATE ANALYSIS

UNIT : 10.00 cum

A. MATERIALS:

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Murum	cum	12.00000	250.00	3000.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	3000.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Diesel road roller 8-10 tonne	Hour	0.17065	192.67	32.88
	Fuel / Energy charges	Hour	0.17065	1205.58	205.73
Total hire charges of Machinery				Rs:	238.61

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Operator road roller	Hour	0.17065	339.46	57.93
2	Cartman with double bullock cart	Day	0.50000	710.00	355.00
3	work inspector	Day	0.50000	775.00	387.50
4	mazdoor	Day	1.50000	595.00	892.50
Total cost of Labour				Rs:	1692.93

labour component/unit qty	169.30
Add contractor's profit and overhead charges	13.615% 23.10
labour component/unit qty (including contractor's profit)	<u>192.40</u>

ABSTRACT:

A. Cost of Materials		Rs:	3000.00
B. Hire charges of Machinery		Rs:	238.61
C. Cost of Labour		Rs:	1692.93
		Total	Rs: 4931.54
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	671.43
Total cost for	10.00 cum	Rs:	<u>5602.97</u>
Rate per cum	(A+B+C+D)/10.0	Rs.	<u>560.30</u>

IRR-CCDW-7-4 Providing and fixing one line dressed 111x35x25 cm thick IRC standard kilometre stone in cement concrete M-10 grade with 40 mm down size aggregates including excavating pit of size 70x45x40 cm, embedding the stone by 30 cm in concrete, providing 2 coats synthetic enamel paint of approved quality and colour to exposed surfaces and lettering as directed, cost of all materials, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSISUNIT : **4 Nos.****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	One line dressed Km stone	No.	4.00000	607.00	2428.00
2	40-20 mm coarse aggregate	cum	0.20000	1441.00	288.20
3	20-10 mm coarse aggregate	cum	0.15000	1508.00	226.20
4	10-4.75 mm coarse aggregate	cum	0.10000	1098.00	109.80
5	Sand (Un-Screened)	cum	0.20000	605.00	121.00
6	Cement	kg	100.00000	4.22	422.00
7	Synthetic enamel paint I st quality	ltr	1.00000	265.00	265.00
8	Sundries (brush / oil etc)	LS	4.00000	41.00	164.00
Total cost of Materials				Rs:	4024.20

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason Cl- II	Day	1.00000	640.00	640.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	1.00000	595.00	595.00
4	Painter Cl- I	Day	1.00000	795.00	795.00
Total cost of Labour				Rs:	2805.00

labour component/unit qty

701.30

Add contractor's profit and overhead charges

13.615% 95.50

labour component/unit qty (including contractor's profit)

796.80**ABSTRACT:**

A. Cost of Materials

Rs: 4024.20

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 2805.00

Total Rs: 6829.20

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs: 929.8

Total cost for

4.00 Nos. Rs: 7759

Rate per No.(A+B+C+D)/4.0 Rs: **1939.75**

IRR-CCDW-7-5 Providing and **fixing one line dressed 65x15x10 cm thick IRC standard hectometre stone in cement concrete M-10** grade with **40 mm down size** aggregates including excavating pit of size 50x45x40 cm, embedding the stone by 30 cm in concrete, providing 2 coats synthetic enamel paint of approved quality and colour to exposed surfaces and lettering as directed, cost of all materials, labour, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **4 Nos.****A. MATERIALS:**

SI No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	One line dressed hectometre stone	No.	4.00000	344.00	1376.00
2	40-20 mm coarse aggregate	cum	0.20000	1441.00	288.20
3	20-10 mm coarse aggregate	cum	0.15000	1508.00	226.20
4	10-4.75 mm coarse aggregate	cum	0.10000	1098.00	109.80
5	Sand (Un-Screened)	cum	0.20000	605.00	121.00
6	Cement	kg	100.00000	4.22	422.00
7	Synthetic enamel paint I st quality	ltr	0.40000	265.00	106.00
8	Sundries (brush / oil etc)	LS	1.00000	41.00	41.00
Total cost of Materials				Rs:	2690.20

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
	(Manual mixing)		0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mason CI- II	Day	1.00000	640.00	640.00
2	work inspector	Day	1.00000	775.00	775.00
3	mazdoor	Day	1.00000	595.00	595.00
4	Painter CI- I	Day	0.50000	795.00	397.50
Total cost of Labour				Rs:	2407.50

labour component/unit qty 601.90

Add contractor's profit and overhead charges 13.615% 81.90

labour component/unit qty (including contractor's profit) **683.80****ABSTRACT:**

A. Cost of Materials

Rs: 2690.20

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 2407.50

Total Rs: 5097.70

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs:

694.05

Total cost for

4.00 Nos.

Rs:

5791.75**Rate per No.**

(A+B+C+D)/4.0

Rs.

1447.94

CHAPTER-V**HYDRAULIC GATES AND ALLIED EQUIPMENT - Standard Data****(WILL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)****FOR THE YEAR : 2024-25****Index - Code
IRR-GAW****GATE HOIST AND ALLIED WORKS - DATA RATES**

- 1 All materials / bought out components for embedded parts, gates, hoists and allied works shall conform to relevant Indian standards / technical specifications and approved drawings.
- 2 The basic rates are EXCLUSIVE of preparation of designs / drawings / material schedules etc., as per specifications and other technical data including revisions.
If designs & drawings are to be done by private agency 2% of estimated cost be added
- 3 The basic rates are inclusive of cost of all materials, machinery, labour, fabrication, erection, commissioning and testing of gates, hoists and other related components as per technical specifications.
- 4 The basic rates are inclusive of finishing, wastage of materials, incidental works, temporary supports, all enabling works, profit, overheads, small tools / plants, hidden cost on labour etc.
- 5 The basic rates are inclusive of duties (excise), levies and all other incidental charges but exclusive of GST. Separate provision shall be made in the estimate towards such tax on works contract at the rate prevailing at the time of preparation of estimate.
- 6 The basic rates are inclusive of all leads and lifts including rehandling.
- 7 no provision is made for stitch welding and it is part of welding work
- 8 The basic rates are inclusive of preparatory works such as rectification of damages, repairing shop painting, cleaning, positioning and anchoring first stage embedments,
- 9 The basic rates are not inclusive of painting with or without sand blasting, and are to be added to the rate as per schedule rates formulated in the same chapter as per applicability and specifications
- 10 The basic rates are exclusive of cost of river diversion arrangements, dewatering, desilting, secondary concreting of EM parts etc., which form part of civil works.
- 11 DESIGNS AND DRAWING CHARGES AT 2% BE ADDED EXTRA TO THE ESTIMATES, IF CONTRACTOR'S SCOPE OF WORK INVOLVES DESIGNS COMPONENT ALSO
- 12 Add AREA ALLOWANCES AS APPLICABLE ON LABOUR COMPONENT ONLY (SHOWN UNDER EACH ITEM)
- 13 Add contractors profit and overheads at 13.615% to all items
- 14 Painting Charges added extra to the data items as per applicability wherever necessary
- 15 HOIST EQUIPMENT 1.-where sand blasting is not possible, hand and power tool cleaning be adopted - Guidance may be taken from Mechanical workshop in this regard
2. Machined surfaces should not be painted
3. for maintenance unless sand blasting is essential hand and power tool cleaning be adopted
- 16 Painting of Hoast Gates is to be done as per IS 14177:1994

**DATA and RATES --- GATE / HOIST AND ALLIED WORKS -
(STORED WITH E-N-C & TO INCORPORATE CHANGES YEARLY / AS NEEDED)**

GAW - Work Items

Index- code
IRR-GAW

TYPES OF GATES:

IRR-GAW-1
IRR-GAW-1-1

A. SPILLWAY RADIAL GATES**E.M Parts and anchorages**

fabrication, supply, erection, testing and **commissioning of Embedded parts for radial gate** consists of sill beam, wall plates, anchor girders , yoke girders, tie flats, trunnion supports etc., including cost of all materials, machinery, labour, welding, finishing, with leads and lifts &all accessories **(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under itemsinthis chapter and add as applicable separately)**

Drawing no. MD/CDO/VRSP/90-92/85-86 (Vengalaraya Sagar - Gomukhi Project)

DATA:

Vent Size:

12.00 X 6.6 Mtrs

RATE ANALYSIS

UNIT :

15.300 tonne

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Str steel angle / beam / channel / bars	kg	3467.00000	60.00	208020.00
2	Structural steel plate	kg	11261.00000	66.00	743226.00
3	Stainless steel plate / flats	kg	515.00000	292.00	150380.00
4	MS bolts and nuts	kg	48.00000	96.00	4608.00
5	Oxygen gas	cum	158.00000	48.00	7584.00
6	Acetyline gas	cum	53.00000	390.00	20670.00
7	Welding electrodes	Nos	11520.00000	17.00	195840.00
8	Welding electrodes (LH)	Nos	2880.00000	22.00	63360.00
9	Welding electrodes (stainless steel)	Nos	1160.00000	27.00	31320.00
10	Use rate welding holder set	Hour	1945.00000	8.93	17368.85
11	Use rate gas cutting torch set	Hour	158.00000	25.59	4043.22
12	Sundries	LS	100.00000	41.00	4100.00
Total cost of Materials				Rs:	1450520.07

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	1945.00000	17.29	33629.05
	Fuel / Energy charges	Hour	1945.00000	101.52	197456.40
2	Tower crane/heavy duty tyre mounted crane	Hour	16.00000	865.81	13852.96
	Fuel / Energy charges	Hour	16.00000	219.95	3519.20
3	Plate shearing machine	Hour	16.00000	47.29	756.64
	Fuel / Energy charges	Hour	16.00000	169.19	2707.04
4	Pug cutting machine	Hour	76.00000	6.82	518.32
	Fuel / Energy charges	Hour	76.00000	4.22	320.72
5	Mobile crane 16 Tonnes	Hour	22.00000	2307.88	50773.36
	Fuel / Energy charges	Hour	22.00000	1758.13	38678.86
6	Stationery derrick crane	Hour	64.00000	87.15	5577.60
	Fuel / Energy charges	Hour	64.00000	0.00	0.00
7	Grinding machine	Hour	30.00000	23.83	714.90
	Fuel / Energy charges	Hour	30.00000	42.30	1269.00
8	Drilling machines	Hour	30.00000	23.83	714.90
	Fuel / Energy charges	Hour	30.00000	42.30	1269.00
9	Planing machine	Hour	100.00000	132.55	13255.00
	Fuel / Energy charges	Hour	100.00000	126.90	12690.00
10	Bending Machine	Hour	30.00000	43.53	1305.90
	Fuel / Energy charges	Hour	30.00000	126.90	3807.00
11	Sundries	LS	100.00000	41.00	4100.00
Total hire charges of Machinery				Rs:	386915.85

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Tower crane	Hour	16.00000	295.36	4725.76
2	Crew for Mobile crane 16 T	Hour	22.00000	833.66	18340.52
3	Crew for Shearing machine	Hour	16.00000	221.52	3544.32
4	Crew for Planing machine	Hour	100.00000	333.22	33322.00
5	Crew for Drilling machine	Hour	30.00000	304.20	9126.00
6	Crew for Grinding machine	Hour	30.00000	304.20	9126.00
7	Crew for Bending machine		30.00000	208.26	6247.80
8	Foreman	Day	15.00000	780.00	11700.00
9	Marker / Fabricator / Erector	Day	75.00000	850.00	63750.00
10	Gas cutter	Day	20.00000	695.00	13900.00
11	Welder (General)	Day	212.00000	695.00	147340.00
12	Welder (X - ray)	Day	48.00000	780.00	37440.00
13	Khalasi	Day	345.00000	695.00	239775.00
14	Helper fabrication / erection	Day	255.00000	640.00	163200.00
15	Electrician	Day	5.00000	790.00	3950.00
Total cost of Labour				Rs:	765487.40

Add towards highly skilled labour charges @ 30% on total cost of labour

229646.22

Total Cost of Labour

995133.62

labour component/unit qty	65041.40
Add contractor's profit and overhead charges 13.615%	8855.40
labour component/unit qty (including contractor's profit)	73896.80

ABSTRACT:

A. Cost of Materials		Rs:	1450520.07
B. Hire charges of Machinery		Rs:	386915.85
C. Cost of Labour		Rs:	995133.62
	Total	Rs:	2832569.54
D. Add for excise duty (on 75 percent cost excluding cost of materials)	0.00%	Rs:	0.00
	Total	Rs:	2832569.54
E. Add for transportation upto work site @	3%	Rs:	84977.09
	Total	Rs:	2917546.63
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	397223.97
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95000 per tonne		794.08
Unloading charges of fabricated parts Rs	111.58 per tonne		3414.34
Total cost for	15.300 tonne	Rs:	3318979.02
	Rate per tonne	Rs:	216926.73

RADIAL GATES**A-2 Gates**

IRR-GAW-1-2 fabrication, supply, erection, testing and **commissioning of radial gate** consisting of skin plate, stiffeners, horizontal girders, radial arms, trunnion assemblies, tie beam, pulley supports, bracings, rubber seals, clamps etc., with all accessories **for spillway/canals** including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings

(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under itemsinthis chapter and add as applicable separately)

Drawing no. MD/CDO/VRSP/170-172/85-86(Vengalaraya Sagar - Gomukhi Project)

Vent Size: 12 X 6.6 M

DATA:

RATE ANALYSISUNIT : Gates and Allied Works - Item Unit Rates 2024-25
29.000 tonne**A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel :				
	Angles / beams / channels / bars	kg	9700.00000	60.00	582000.00
	Plates	kg	16850.00000	66.00	1112100.00
2	Cast steel components :				
	Trunnion hubs / Guide rollers	kg	2100.00000	221.00	464100.00
3	Alluminium / Bronze alloy components :				
	Bush for Trunnion / Guide roller	kg	350.00000	1067.00	373450.00
4	Bolt / Nut / Washer :				
	GI bolts / nuts / washers	kg	250.00000	146.00	36500.00
5	Zinc/Babbit Metal	kg	50.00000	198.00	9900.00
6	Rubber seals :				
	Bottom seal	Rm	12.00000	731.00	8772.00
	Side seals (Z - type)	Rm	14.00000	1502.00	21028.00
7	Oxygen gas	cum	228.00000	48.00	10944.00
8	Acetyline gas	cum	76.00000	390.00	29640.00
9	Welding electrodes (std)	Nos	1000.00000	17.00	17000.00
10	Welding electrodes (LH)	Nos	250.00000	22.00	5500.00
11	Use rate welding holder set	Hour	156.00000	8.93	1393.08
12	Use rate gas cutting torch set	Hour	228.00000	25.59	5834.52
13	Sundries	LS	500.00000	41.00	20500.00
Total cost of Materials				Rs:	2698661.60

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	156.00000	17.29	2697.24
	Fuel / Energy charges	Hour	156.00000	101.52	15837.12
2	Plate shearing machine	Hour	29.00000	47.29	1371.41
	Fuel / Energy charges	Hour	29.00000	169.19	4906.51
3	Pug cutting machine	Hour	114.00000	6.82	777.48
	Fuel / Energy charges	Hour	114.00000	4.22	481.08
4	Bending machine	Hour	116.00000	43.53	5049.48
	Fuel / Energy charges	Hour	116.00000	126.90	14720.40
5	Tower crane 5 t capacity	Hour	29.00000	865.81	25108.49
	Fuel / Energy charges	Hour	29.00000	219.95	6378.55
6	Mobile derric crane	Hour	58.00000	552.23	32029.34
	Fuel / Energy charges	Hour	58.00000	506.34	29367.72
7	Stationery derric crane	Hour	58.00000	87.15	5054.70
	Fuel / Energy charges	Hour	58.00000	0.00	0.00
8	Grinding machine	Hour	58.00000	23.83	1382.14
	Fuel / Energy charges	Hour	58.00000	42.30	2453.40
9	Drilling machines	Hour	58.00000	23.83	1382.14
	Fuel / Energy charges	Hour	58.00000	42.30	2453.40
10	Mobile Crane 30 T	Hour	100.00000	3264.25	326425.00
	Fuel / Energy charges	Hour	100.00000	1987.99	198799.00
11	Sundries	LS	500.00000	41.00	20500.00
Total hire charges of Machinery				Rs:	697174.60

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane 30T	Hour	100.00000	833.66	83366.00
2	Crew for Tower crane	Hour	29.00000	295.36	8565.44
3	Crew for Bending machine	Hour	116.00000	208.26	24158.16
4	Crew for Drilling machine	Hour	58.00000	304.20	17643.60
5	Crew for Grinding machine	Hour	58.00000	304.20	17643.60
6	Foreman	Day	29.00000	780.00	22620.00
7	Marker / Fabricator / Erector	Day	145.00000	850.00	123250.00
8	Gas cutter	Day	29.00000	695.00	20155.00
9	Welder (General)	Day	17.00000	695.00	11815.00
10	Welder (X - ray)	Day	5.00000	780.00	3900.00
11	Khalasi	Day	493.00000	695.00	342635.00
12	Helper fabrication / erection	Day	667.00000	640.00	426880.00
13	Electrician	Day	15.00000	790.00	11850.00
Total cost of Labour				Rs:	1114481.80

Add towards highly skilled labour charges @ 30% on total cost of labour

334344.54

Total Cost of Labour

1448826.34

labour component/unit qty 49959.50

Add contractor's profit and overhead charges 13.615% 6802.00

labour component/unit qty (including contractor's profit) **56761.50****ABSTRACT:**

A. Cost of Materials		Rs:	2698661.60
B. Hire charges of Machinery		Rs:	697174.60
C. Cost of Labour		Rs:	1448826.34
	Total	Rs:	4844662.54
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	4844662.54
E. Add for transportation upto work site @	3%	Rs:	145339.88
	Total	Rs:	4990002.42
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	679388.83
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		1505.10
Unloading charges of fabricated parts Rs	111.58 per tonne		6471.64
Total cost for	29.00000 tonne	Rs:	5677367.99
	Rate per tonne	Rs:	195771.31

IRR-GAW-1-3 RADIAL GATES-ROPE DRUM HOISTS WITH HOIST BRIDGES

Fabrication, supply, erection, testing and **commissioning of electrically operated rope drum hoist of adequate capacity** consisting of base frames, rope drums, connecting shaft, gear system, brake system, electric motor, wire ropes, gate position indicator, manual operation arrangement etc., with all accessories for spillway radial gate including cost of all materials, machinery, labour, greasing, providing hand railing and approach staircase with gate to hoist platform, complete as per specifications and approved drawings

DATA:

RATE ANALYSISGates and Allied Works - Item Unit Rates 2024-25
UNIT : **15.440** tonne wt**A. MATERIALS:****90.00** t capacity

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel				
	Angles / beams / channels / bars	kg	2571.0000	60.00	154260.00
	Plates	kg	3632.0000	66.00	239712.00
2	Cast steel components :				
	Rope drums 2 Nos / Gears 4 Nos	kg	3680.0000	266.00	978880.00
	Pinions	kg	218.0000	257.00	56026.00
	Pulleys 720 PCD 6 Nos	kg	1080.0000	221.00	238680.00
	Plummer blocks / Hubs	kg	322.0000	221.00	71162.00
3	Alloy steel components				
	Shafts	kg	557.0000	264.00	147048.00
	Pins	kg	546.0000	483.00	263718.00
4	Bronze alloy components :				
	Bronze bearings / bush	kg	144.0000	1067.00	153648.00
5	Wire rope 36 mm dia 6/37 construction	kg	448.0000	203.00	90944.00
6	MS Bolt / Nut / Washer	kg	85.0000	96.00	8160.00
7	Worm reducers	No.	1.0000	222598.00	222598.00
8	Electric motor 20 hp	No.	1.0000	124422.00	124422.00
9	Floating shaft 300 mm dia	kg	1000.0000	193.00	193000.00
10	Manual operating system	No.	1.0000	32482.00	32482.00
11	Gate position indicator	No.	1.0000	203550.00	203550.00
12	Ele-magnetic brake	No.	1.0000	32386.00	32386.00
13	Electric cable / switch / control panel etc	LS	1.0000	54683.00	54683.00
14	Oxygen gas	cum	213.0000	48.00	10224.00
15	Acetyline gas	cum	71.0000	390.00	27690.00
16	Welding electrodes	Nos	530.0000	17.00	9010.00
17	Welding electrodes (LH)	Nos	4776.0000	22.00	105072.00
18	Grease	kg	50.0000	297.00	14850.00
19	Use rate welding holder set	Hour	566.0000	8.93	5054.38
20	Use rate gas cutting torch set	Hour	90.0000	25.59	2303.10
21	Sundries (hand rail /staircase / gate e	LS	200.0000	41.00	8200.00
Total cost of Materials				Rs:	3447762.48

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	566.0000	17.29	9786.14
	Fuel / Energy charges	Hour	353.0000	101.52	35836.56
2	Tower crane 5 t capacity	Hour	4.0000	865.81	3463.24
	Fuel / Energy charges	Hour	4.0000	219.95	879.80
3	Pug cutting machine	Hour	53.0000	6.82	361.46
	Fuel / Energy charges	Hour	53.0000	4.22	223.66
4	Mobile derrick crane	Hour	50.0000	552.23	27611.50
	Fuel / Energy charges	Hour	50.0000	506.34	25317.00
5	Grinding machine	Hour	8.0000	23.83	190.64
	Fuel / Energy charges	Hour	8.0000	42.30	338.40
6	Drilling machines	Hour	16.0000	23.83	381.28
	Fuel / Energy charges	Hour	16.0000	42.30	676.80
7	Sundries	LS	100.0000	41.00	4100.00
Total hire charges of Machinery				Rs:	109166.48

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane	Hour	50.0000	273.98	13699.00
2	Crew for Tower crane	Hour	4.0000	295.36	1181.44
3	Crew for Drilling machine	Hour	16.0000	304.20	4867.20
4	Crew for Grinding machine	Hour	8.0000	304.20	2433.60
5	Foreman	Day	35.0000	780.00	27300.00
6	Marker / Fabricator / Erector / Mechanic	Day	58.0000	850.00	49300.00
7	Gas cutter	Day	18.0000	695.00	12510.00
8	Welder (General)	Day	53.0000	695.00	36835.00
9	Khalasi	Day	20.0000	695.00	13900.00
10	Helper fabrication / erection	Day	175.0000	640.00	112000.00
11	Electrician	Day	3.0000	790.00	2370.00
Total cost of Labour				Rs:	276396.24

Add towards highly skilled labour charges @ 30% on total cost of labour

82918.87

Total Cost of Labour

359315.11

labour component/unit qty

3992.40

Add contractor's profit and overhead charges

13.615% 543.60

labour component/unit qty (including contractor's profit)

4536.00**ABSTRACT:**

A. Cost of Materials

Rs: 3447762.48

B. Hire charges of Machinery

Rs: 109166.48

C. Cost of Labour

Rs: 359315.11

Total

Rs: 3916244.07

D. Add for excise duty

0.00%

Rs: 0.00

(on 75 percent cost excluding cost of materials)

Total

Rs: 3916244.07

E. Add for transportation upto work site @

3%

Rs: 117487.32

Total

Rs: 4033731.39

F. Add for contractor's profit and overheads on

(A+B+C+D+E)

13.615%

Rs: 549192.53

Add 2 leads

Add 1 km lead charges for fabricated parts

25.95 per tonne

801.34

Unloading charges of fabricated parts Rs

111.58 per tonne

3445.60

Total cost for

15.44 tonne wt

Rs: 4587170.86

Total cost for

90.00 t capacity

Rs: to be verified

Rate per tonne wt

Rs: 297096.56

Rate per tonne capacity of hoist

50968.57**IRR-GAW-1-4 Walk way (cat walk)**

fabrication, supply, erection and **commissioning of 1 metre wide walkway connecting spillway piers / abutments** at trunnion platform level including cost of all materials, machinery, labour, cutting, welding etc, complete as per specifications and approved drawings **(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under items in this chapter and add as applicable separately)**

DATA:

RATE ANALYSIS

UNIT :

5.22 MT**A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel				
	Angles / beams / channels / bars	kg	4258.00000	60.00	255480.00
	Plates	kg	98.00000	66.00	6468.00
	Chequered plates	kg	856.00000	68.00	58208.00
2	MS bolts / nuts / washers	kg	8.00000	96.00	768.00
3	Oxygen gas	cum	51.00000	48.00	2448.00
4	Acetyline gas	cum	17.00000	390.00	6630.00
5	Welding electrodes	Nos	1195.00000	17.00	20315.00
6	Use rate welding holder set	Hour	150.00000	8.93	1339.50
7	Use rate gas cutting torch set	Hour	30.00000	25.59	767.70
8	Sundries	LS	10.00000	41.00	410.00
Total cost of Materials				Rs:	352834.20

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	150.00000	17.29	2593.50
	Fuel / Energy charges	Hour	150.00000	101.52	15228.00
2	Tower crane	Hour	6.00000	865.81	5194.86
	Fuel / Energy charges	Hour	6.00000	219.95	1319.70
3	Pug cutting machine	Hour	12.00000	6.82	81.84
	Fuel / Energy charges	Hour	12.00000	4.22	50.64
4	Mobile CRANE 16T	Hour	8.00000	2307.88	18463.04
	Fuel / Energy charges	Hour	8.00000	1758.13	14065.04
5	Grinding machine	Hour	12.00000	23.83	285.96
	Fuel / Energy charges	Hour	12.00000	42.30	507.60
6	Drilling machines	Hour	12.00000	23.83	285.96
	Fuel / Energy charges	Hour	12.00000	42.30	507.60
7	Bending Machine	Hour	10.00000	43.53	435.30
	Fuel / Energy charges	Hour	10.00000	126.90	1269.00
8	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	60698.04

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane 16T	Hour	10.00000	833.66	8336.60
2	Crew for Tower crane	Hour	6.00000	295.36	1772.16
3	Crew for Drilling machine	Hour	12.00000	304.20	3650.40
4	Crew for Grinding machine	Hour	12.00000	304.20	3650.40
5	Crew for Bending machine	Hour	10.00000	208.26	2082.60
6	Foreman	Day	6.00000	780.00	4680.00
7	Marker / Fabricator / Erector	Day	25.00000	850.00	21250.00
8	Gas cutter	Day	5.00000	695.00	3475.00
9	Welder (General)	Day	20.00000	695.00	13900.00
10	Helper fabrication / erection	Day	200.00000	640.00	128000.00
11	Electrician	Day	2.00000	790.00	1580.00
Total cost of Labour				Rs:	192377.16

Add towards highly skilled labour charges @ 30% on total cost of labour

57713.15

Total Cost of Labour

250090.31

labour component/unit qty

47910.00

Add contractor's profit and overhead charges

13.615%

6522.90

labour component/unit qty (including contractor's profit)

54432.90**ABSTRACT:**

A. Cost of Materials

Rs: 352834.20

B. Hire charges of Machinery

Rs: 60698.04

C. Cost of Labour

Rs: 250090.31

Total

Rs: 663622.55

D. Add for excise duty

0.00%

Rs: 0.00

(on 75 percent cost excluding cost of materials)

Total

Rs: 663622.55

E. Add for transportation upto work site @

3%

Rs: 19908.68

Total

Rs: 683531.23

F. Add for contractor's profit and overheads on

(A+B+C+D+E)

13.615%

Rs: 93062.78

Add 2 leads

Add 1 km lead charges for fabricated parts

25.95 per tonne

270.92

Unloading charges of fabricated parts Rs.

111.58 per tonne

1164.90

Total cost for

5.22 MT

Rs: 778029.83

Rate per MT

Rs: **149047.86****IRR-GAW-2 VERTICAL LIFT GATES-EM PARTS**IRR-GAW-2-1 Design, fabrication, supply, erection and **commissioning of embedded parts** consisting of

sill beam, slide tracks, seal seats, guide rails, dogging sets for storage of stoplog elements

etc., with all accessories for spillway stop log gates and other vertical lift elements including cost of all materials,

machinery, labour, etc., complete as per specifications and approved drawings

(without painting on sand-blasted or mechanical cleaning surfaces which are added extra**as perschedule of rates under items in this chapter and add as applicable separately)**

Drawing No. MD/CDO/GNCP/HR/1759,1760/94 (GNSS Project)

Vent Size:

3.6 X 6.1 Mtr

DATA:

RATE ANALYSIS

UNIT :

6.300 tonne**A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Str steel angle / beam / channel / bars	kg	1885.00000	60.00	113100.00
2	Structural steel plate	kg	3890.00000	66.00	256740.00
3	Stainless steel plate / flats	kg	271.00000	292.00	79132.00
4	MS bolts and nuts	kg	50.00000	96.00	4800.00
5	Oxygen gas	cum	225.00000	48.00	10800.00
6	Acetyline gas	cum	75.00000	390.00	29250.00
7	Welding electrodes	Nos	1410.00000	17.00	23970.00
8	Welding electrodes (LH)	Nos	350.00000	22.00	7700.00
9	Welding electrodes (stainless steel)	Nos	1320.00000	27.00	35640.00
10	Use rate welding holder set	Hour	385.00000	8.93	3438.05
11	Use rate gas cutting torch set	Hour	225.00000	25.59	5757.75
12	Sundries	LS	40.00000	41.00	1640.00
Total cost of Materials				Rs:	571967.80

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	385.00000	17.29	6656.65
	Fuel / Energy charges	Hour	385.00000	101.52	39085.20
2	Plate shearing machine	Hour	8.00000	47.29	378.32
	Fuel / Energy charges	Hour	8.00000	169.19	1353.52
3	Pug cutting machine	Hour	110.00000	6.82	750.20
	Fuel / Energy charges	Hour	110.00000	4.22	464.20
4	Planing machine	Hour	270.00000	132.55	35788.50
	Fuel / Energy charges	Hour	270.00000	126.90	34263.00
5	Mobile Crane 16 T	Hour	24.00000	2307.88	55389.12
	Fuel / Energy charges	Hour	24.00000	1758.13	42195.12
6	Stationary derric crane	Hour	14.00000	87.15	1220.10
	Fuel / Energy charges	Hour	14.00000	0.00	0.00
7	Grinding machine	Hour	14.00000	23.83	333.62
	Fuel / Energy charges	Hour	14.00000	42.30	592.20
8	Drilling machines	Hour	21.00000	23.83	500.43
	Fuel / Energy charges	Hour	21.00000	42.30	888.30
9	Bending Machine	Hour	14.00000	43.53	609.42
	Fuel / Energy charges	Hour	14.00000	126.90	1776.60
10	Sundries	LS	40.00000	41.00	1640.00
Total hire charges of Machinery				Rs:	223884.50

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane 16 T	Hour	24.00000	833.66	20007.84
2	Crew for Planing machine	Hour	270.00000	333.22	89969.40
3	Crew for Drilling machine	Hour	21.00000	304.20	6388.20
4	Crew for Grinding machine	Hour	14.00000	304.20	4258.80
5	Crew for Bending machine	Hour	14.00000	208.26	2915.64
6	Foreman	Day	32.00000	780.00	24960.00
7	Marker / Fabricator / Erector	Day	35.00000	850.00	29750.00
8	Gas cutter	Day	9.00000	695.00	6255.00
9	Welder (General)	Day	46.00000	695.00	31970.00
10	Welder (X - ray)	Day	6.00000	780.00	4680.00
11	Helper fabrication / erection	Day	240.00000	640.00	153600.00
12	Electrician	Day	4.00000	790.00	3160.00
Total cost of Labour				Rs:	377914.88

Add towards highly skilled labour charges @ 30% on total cost of labour
Total Cost of Labour

Gates and Allied Works - Item Unit Rates 2024-25

113374.46

491289.34

labour component/unit qty	77982.40
Add contractor's profit and overhead charges 13.615%	10617.30
labour component/unit qty (including contractor's profit)	88599.70

ABSTRACT:

A. Cost of Materials		Rs:	571967.80
B. Hire charges of Machinery		Rs:	223884.50
C. Cost of Labour		Rs:	491289.34
	Total	Rs:	1287141.64
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	1287141.64
E. Add for transportation upto work site @	3%	Rs:	38614.25
	Total	Rs:	1325755.89
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	180501.66
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		326.98
Unloading charges of fabricated parts Rs	111.58 per tonne		1405.90
Total cost for	6.30 tonne	Rs:	1507990.43
	Rate per tonne	Rs:	239363.56

Vertical lift gates and stop log gate elements (SLIDING GATES)

IRR-GAW-2-2 Design, fabrication, supply, erection, testing and commissioning of vertical lift gates and

stoplog gate elements, consisting of skin plate,

horizontal and vertical girders, stiffeners, lifting pins, bronze padded slide blocks/bearings, guide shoes, rubber seals, clamps etc., with all accessories including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings
(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under items in this chapter and add as applicable separately)

Drawing NO. CE/CDO/CL3/MRP/783/2002 (Spillway Stop log gate Elements of Madduvalasa Project)

Vent Size: 12.624 X 0.50 M 16 Elements

DATA:

RATE ANALYSIS

UNIT : **119.000 tonne**

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel				
	Angles / beams / channels / bars	kg	5280.00000	60.00	316800.00
	Plates	kg	112880.00000	66.00	7450080.00
2	Alloy steel components				
	Lifting pins	kg	520.00000	483.00	251160.00
3	Bolt / Nut / Washer				
	GI bolts / nuts / washers	kg	600.00000	146.00	87600.00
4	Rubber seals				
	Bottom seal	Rm	210.00000	731.00	153510.00
	Side seals	Rm	18.00000	1201.00	21618.00
5	Oxygen gas	cum	2714.00000	48.00	130272.00
6	Acetyline gas	cum	905.00000	390.00	352950.00
7	Welding electrodes	Nos	86554.00000	17.00	1471418.00
8	Welding electrodes (LH)	Nos	16486.00000	22.00	362692.00
9	Use rate welding holder set	Hour	12880.00000	8.93	115018.40
10	Use rate gas cutting torch set	Hour	2714.00000	25.59	69451.26
11	Sundries	LS	400.00000	41.00	16400.00
	Total cost of Materials			Rs:	10798969.66

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	12880.00000	17.29	222695.20
	Fuel / Energy charges	Hour	12880.00000	101.52	1307577.60
2	Pug cutting machine	Hour	6440.00000	6.82	43920.80
	Fuel / Energy charges	Hour	6440.00000	4.22	27176.80
3	Mobile crane 16 T	Hour	360.00000	2307.88	830836.80
	Fuel / Energy charges	Hour	360.00000	1758.13	632926.80
4	Stationery derrick crane	Hour	238.00000	87.15	20741.70
	Fuel / Energy charges	Hour	238.00000	0.00	0.00
5	Grinding machine	Hour	238.00000	23.83	5671.54
	Fuel / Energy charges	Hour	238.00000	42.30	10067.40
6	Drilling machines	Hour	357.00000	23.83	8507.31
	Fuel / Energy charges	Hour	357.00000	42.30	15101.10
7	Bending Machine	Hour	240.00000	43.53	10447.20
	Fuel / Energy charges	Hour	240.00000	126.90	30456.00
8	Sundries	LS	180.00000	41.00	7380.00
Total hire charges of Machinery				Rs:	3173506.25

to be verifi

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane 16T	Hour	360.00000	833.66	300117.60
2	Crew for Drilling machine	Hour	357.00000	304.20	108599.40
3	Crew for Grinding machine	Hour	238.00000	304.20	72399.60
4	Crew for Bending machine	Hour	240.00000	208.26	49982.40
5	Foreman	Day	120.00000	780.00	93600.00
6	Marker / Fabricator / Erector	Day	195.00000	850.00	165750.00
7	Gas cutter	Day	100.00000	695.00	69500.00
8	Welder (General)	Day	1442.00000	695.00	1002190.00
9	Welder (X - ray)	Day	275.00000	780.00	214500.00
10	Khalasi	Day	2023.00000	695.00	1405985.00
11	Helper fabrication / erection	Day	2727.00000	640.00	1745280.00
12	Electrician	Day	10.00000	790.00	7900.00
Total cost of Labour				Rs:	5235804.00

Add towards highly skilled labour charges @ 30% on total cost of labour

1570741.20

Total Cost of Labour

6806545.20

labour component/unit qty

57197.90

Add contractor's profit and overhead charges 13.615%

7787.50

labour component/unit qty (including contractor's profit)

64985.40**ABSTRACT:**

A. Cost of Materials		Rs:	10798969.66
B. Hire charges of Machinery		Rs:	3173506.25
C. Cost of Labour		Rs:	6806545.20
	Total	Rs:	20779021.11
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	20779021.11
E. Add for transportation upto work site @	3%	Rs:	623370.63
	Total	Rs:	21402391.74
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	2913935.64
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		6176.10
Unloading charges of fabricated parts	111.58 per tonne		26556.04
Total cost for	119.00 tonne	Rs:	24349059.52
	Rate per tonne	Rs:	204613.95

STOP LOGS-automatic lifting beam

IRR-GAW-2-3 Fabrication, supply, erection, testing and **commissioning of automatic lifting beam with all accessories for handling**, lowering and lifting of spillway stop log gate elements including cost of all materials, machinery, labour, cutting, aligning, welding, finishing, etc., complete as per specifications and drawings with all leads and lifts.
(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perscedule of rates under items in this chapter and add as applicable separately)

DATA:

RATE ANALYSISUNIT : Gates and Allied Works - Item Unit Rates 2024-25
3.528 tonne**A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel				
	Angles / beams / channels / bars	kg	13.00000	60.00	780.00
	Flats	kg	3389.00000	61.00	206729.00
2	Alloy steel components				
	Lifting pins	kg	101.00000	483.00	48783.00
3	Bronze alloy components :				
	Bronze bush	kg	5.00000	1067.00	5335.00
4	Forged steel components :				
	Lifting hooks	kg	103.00000	318.00	32754.00
5	MS pipe 100 mm dia	kg	11.00000	186.00	2046.00
6	Bolt / Nut / Washer				
	MS bolts / nuts / washers	kg	3.00000	96.00	288.00
7	Oxygen gas	cum	126.00000	48.00	6048.00
8	Acetyline gas	cum	42.00000	390.00	16380.00
9	Welding electrodes	Nos	175.00000	17.00	2975.00
10	Welding electrodes (LH)	Nos	1575.00000	22.00	34650.00
11	Use rate welding holder set	Hour	187.00000	8.93	1669.91
12	Use rate gas cutting torch set	Hour	24.00000	25.59	614.16
13	Sundries	LS	25.00000	41.00	1025.00
Total cost of Materials				Rs:	360077.07

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	187.00000	17.29	3233.23
	Fuel / Energy charges	Hour	117.00000	101.52	11877.84
2	Pug cutting machine	Hour	60.00000	6.82	409.20
	Fuel / Energy charges	Hour	60.00000	4.22	253.20
3	Mobile derrick crane	Hour	4.00000	552.23	2208.92
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
4	Stationery derrick crane	Hour	8.00000	87.15	697.20
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
5	Grinding machine	Hour	2.00000	23.83	47.66
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
6	Drilling machines	Hour	2.00000	23.83	47.66
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
7	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	21379.47

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane	Hour	4.00000	273.98	1095.92
2	Crew for Drilling machine	Hour	2.00000	304.20	608.40
3	Crew for Grinding machine	Hour	2.00000	304.20	608.40
4	Foreman	Day	10.00000	780.00	7800.00
5	Marker / Fabricator / Erector	Day	18.00000	850.00	15300.00
6	Gas cutter	Day	10.00000	695.00	6950.00
7	Welder (General)	Day	18.00000	695.00	12510.00
8	Helper fabrication / erection	Day	52.00000	640.00	33280.00
9	Electrician	Day	1.00000	790.00	790.00
Total cost of Labour				Rs:	78942.72

Add towards highly skilled labour charges @ 30% on total cost of labour

23682.82

Total Cost of Labour

102625.54

labour component/unit qty

29088.90

Add contractor's profit and overhead charges

13.615% 3960.50

labour component/unit qty (including contractor's profit)

33049.40

ABSTRACT:

A. Cost of Materials		Rs:	360077.07
B. Hire charges of Machinery		Rs:	21379.47
C. Cost of Labour		Rs:	102625.54
	Total	Rs:	484082.08
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	484082.08
E. Add for transportation upto work site @	3%	Rs:	14522.46
	Total	Rs:	498604.54
F. Add for contractor's profit and overheads on	13.615%	Rs:	67885.01
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		183.10
Unloading charges of fabricated parts Rs	111.58 per tonne		787.30
Total cost for	3.528 tonne	Rs:	567459.95
	Rate per tonne	Rs:	160844.66

MOVING GANTRY CRANE-CLASS II

- IRR-GAW-2-4 Fabrication, supply, erection, testing and **commissioning of adequate capacity Class- II type moving gantry crane** consisting of rail mounted gantry frame, top platform with hand railing, long / cross travel arrangements, rope drums, gear systems, electric motors, electro-magnetic brake system, cabin, control panel, wire rope, ladder, motorised cable reeling drum etc., with all accessories for operating spillway stop log gate elements and river sluice / canal sluice emergency gates including cost of all materials, machinery, labour, etc., complete **with all leads and lifts**.
(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under items in this chapter and add as applicable separately)

DATA:

RATE ANALYSISGates and Allied Works - Item Unit Rates 2024-25
UNIT : **30.856** tonne**A. MATERIALS:****25 t capacity**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel				
	Angles / beams / channels / bars	kg	1743.00000	60.00	104580.00
	Plates	kg	19700.00000	66.00	1300200.00
	Chequered plates	kg	820.00000	68.00	55760.00
2	Cast steel components :				
	Rope drums 2 Nos/Gears	kg	1320.00000	266.00	351120.00
	pinions	kg	1165.00000	257.00	299405.00
	Wheels / Pulleys	kg	2255.00000	221.00	498355.00
	Plummer blocks / Couplings	kg	817.00000	221.00	180557.00
3	Forged steel components				
	Hook / Shackle	kg	127.00000	318.00	40386.00
4	Alloy steel components				
	Shafts	kg	556.00000	264.00	146784.00
	Pins	kg	524.00000	483.00	253092.00
5	Bronze alloy components :				
	Bronze bearings / bush	kg	181.00000	1067.00	193127.00
6	Wire rope 28 mm dia 6/37 constructio	kg	406.00000	203.00	82418.00
7	MS Bolt / Nut / Washer	kg	63.00000	96.00	6048.00
8	MS pipe 32 mm dia for railing	Rm	50.00000	199.00	9950.00
9	Worm reducers	Nos.	4.00000	222598.00	890392.00
10	Electric motor 17.5 hp	No.	1.00000	82237.00	82237.00
	Electric motor 5 hp	Nos.	2.00000	31517.00	63034.00
	Electric motor 3 hp	No.	1.00000	21908.00	21908.00
11	Ele-magnetic / Thruster brakes	Nos.	4.00000	32386.00	129544.00
12	etc	LS	3.00000	54683.00	164049.00
13	Oxygen gas	cum	579.00000	48.00	27792.00
14	Acetyline gas	cum	193.00000	390.00	75270.00
15	Welding electrodes	Nos	1123.00000	17.00	19091.00
16	Welding electrodes (LH)	Nos	10110.00000	22.00	222420.00
17	Grease	kg	50.00000	297.00	14850.00
18	Use rate welding holder set	Hour	1197.00000	8.93	10689.21
19	Use rate gas cutting torch set	Hour	150.00000	25.59	3838.50
20	Sundries	LS	200.00000	41.00	8200.00
Total cost of Materials				Rs:	5255096.71

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	1197.00000	17.29	20696.13
	Fuel / Energy charges	Hour	748.00000	101.52	75936.96
2	Tower crane 5 t capacity	Hour	6.00000	865.81	5194.86
	Fuel / Energy charges	Hour	6.00000	219.95	1319.70
3	Pug cutting machine	Hour	235.00000	6.82	1602.70
	Fuel / Energy charges	Hour	235.00000	4.22	991.70
4	Mobile derrick crane	Hour	100.00000	552.23	55223.00
	Fuel / Energy charges	Hour	100.00000	506.34	50634.00
5	Grinding machine	Hour	32.00000	23.83	762.56
	Fuel / Energy charges	Hour	32.00000	42.30	1353.60
6	Drilling machines	Hour	16.00000	23.83	381.28
	Fuel / Energy charges	Hour	16.00000	42.30	676.80
7	Sundries	LS	500.00000	41.00	20500.00
Total hire charges of Machinery				Rs:	235273.29

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane	Hour	100.00000	273.98	27398.00
2	Crew for Tower crane	Hour	6.00000	295.36	1772.16
3	Crew for Drilling machine	Hour	16.00000	304.20	4867.20
4	Crew for Grinding machine	Hour	32.00000	304.20	9734.40
5	Foreman	Day	74.00000	780.00	57720.00
6	Marker / Fabricator / Erector	Day	124.00000	850.00	105400.00
7	Gas cutter	Day	48.00000	695.00	33360.00
8	Welder (General)	Day	112.00000	695.00	77840.00
9	Khalasi	Day	20.00000	695.00	13900.00
10	Helper fabrication / erection	Day	350.00000	640.00	224000.00
11	Electrician	Day	10.00000	790.00	7900.00
Total cost of Labour				Rs:	563891.76

Add towards highly skilled labour charges @ 30% on total cost of labour

169167.53

Total Cost of Labour

733059.29

labour component/unit qty	29322.40
Add contractor's profit and overhead charges 13.615%	3992.20
labour component/unit qty (including contractor's profit)	33314.60

ABSTRACT:

A. Cost of Materials		Rs:	5255096.71
B. Hire charges of Machinery		Rs:	235273.29
C. Cost of Labour		Rs:	733059.29
	Total	Rs:	6223429.29
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	6223429.29
E. Add for transportation upto work site @	3%	Rs:	186702.88
	Total	Rs:	6410132.17
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	872739.49
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		1601.42
Unloading charges of fabricated parts Rs	111.58 per tonne		6885.82
Total cost for	30.856 tonne	Rs:	7291358.90
	25.000 t capacity	Rs:	
	Rate per tonne	Rs:	236302.79
	Rate per tonne capacity	Rs:	291654.36

RAIL TRACK FOR GANTRY CRANE

IRR-GAW-2-5 Design, fabrication, supply, erection and commissioning of rail track using 45 kg / m standard

rails on spillway bridge for movement of gantry crane for handling and operating spillway

stoplog gate elements / river sluice / canal sluice emergency gate including cost of all materials, machinery, labour, complete as per specifications

(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

DATA:

RATE ANALYSISUNIT : **200.000 Rm****A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Str steel angle / beam / channel / bars	kg	1570.00000	60.00	94200.00
2	Structural steel plate	kg	975.00000	66.00	64350.00
3	Rails	kg	18450.00000	63.42	1170062.10
4	MS bolts and nuts	kg	246.00000	96.00	23616.00
5	Oxygen gas	cum	201.00000	48.00	9648.00
6	Acetyline gas	cum	67.00000	390.00	26130.00
7	Welding electrodes	Nos	1805.00000	17.00	30685.00
8	Use rate welding holder set	Hour	193.00000	8.93	1723.49
9	Use rate gas cutting torch set	Hour	133.00000	25.59	3403.47
10	Sundries	LS	10.00000	41.00	410.00
Total cost of Materials				Rs:	1424228.06

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	193.00000	17.29	3336.97
	Fuel / Energy charges	Hour	121.00000	101.52	12283.92
2	Mobile derrick crane	Hour	4.00000	552.23	2208.92
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
3	Grinding machine	Hour	8.00000	23.83	190.64
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
4	Drilling machines	Hour	50.00000	23.83	1191.50
	Fuel / Energy charges	Hour	50.00000	42.30	2115.00
5	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	24100.71

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane	Hour	4.00000	273.98	1095.92
2	Crew for Drilling machine	Hour	50.00000	304.20	15210.00
3	Crew for Grinding machine	Hour	8.00000	304.20	2433.60
4	Foreman	Day	8.00000	780.00	6240.00
5	Marker / Fabricator / Erector	Day	32.00000	850.00	27200.00
6	Gas cutter	Day	17.00000	695.00	11815.00
7	Welder (General)	Day	18.00000	695.00	12510.00
8	Helper fabrication / erection	Day	52.00000	640.00	33280.00
9	Electrician	Day	1.00000	790.00	790.00
Total cost of Labour				Rs:	110574.52

Add towards highly skilled labour charges @ 30% on total cost of labour

33172.36

Total Cost of Labour

143746.88

labour component/unit qty

718.70

Add contractor's profit and overhead charges

13.615% 97.90

labour component/unit qty (including contractor's profit)

816.60**ABSTRACT:**

A. Cost of Materials		Rs:	1424228.06
B. Hire charges of Machinery		Rs:	24100.71
C. Cost of Labour		Rs:	143746.88
	Total	Rs:	1592075.65
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	1592075.65
E. Add for transportation upto work site @	3%	Rs:	47762.27
	Total	Rs:	1639837.92
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	223263.93
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		1075.48
Unloading charges of fabricated parts Rs	111.58 per tonne		4624.32
Total cost for	200.000 Rm	Rs:	1868801.65
	Rate per Rm	Rs:	9344.01

VERTICAL LIFT GATES/STOP LOGS - ROLLER MOUNTED

IRR-GAW-2-6 Design, fabrication, supply, erection, testing and **commissioning of fixed wheel type vertical lift service gate** consisting of skin plate, vertical and horizontal girders, wheels, stiffeners, lifting brackets, guide rollers, ballast blocks, teflon clad rubber seals etc., with all accessories for river sluice / canal sluice vent including cost of all materials, machinery, labour, welding, aligning finishing seal fixing etc. with all leads and lifts, complete as per specifications and approved drawings **(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)**

Gate Size: 3.66 X 6.1 Mtr

DATA:

RATE ANALYSIS

UNIT : 10.000 tonne

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel				
	Plates	kg	7103.00000	66.00	468798.00
	Beams/Channels	kg	2727.00000	60.00	163620.00
2	Alloy steel components				
	Wheel axles / Pins	kg	108.00000	483.00	52164.00
3	Cast steel components				
	Wheels / Guide rollers	kg	504.00000	221.00	111384.00
4	Alluminium / Bronze alloy components				
	Bearings	kg	12.00000	1067.00	12804.00
5	Bolt / Nut / Washer				
	GI bolts / nuts / washers	kg	36.00000	109.00	3924.00
	MS bolts / nuts / washers	kg	6.00000	96.00	576.00
6	Rubber seals				
	Bottom seal (flat uncladed)	Rm	3.72000	731.00	2719.32
	Side seals (bulb teflon claded)	Rm	12.30000	1575.00	19372.50
	Top seal (bulb teflon claded)	Rm	3.72000	1575.00	5859.00
	Corner seals (bulb teflon claded)	Nos	2.00000	1645.00	3290.00
7	Oxygen gas	cum	170.00000	48.00	8160.00
8	Acetyline gas	cum	56.00000	390.00	21840.00
9	Welding electrodes	Nos	3200.00000	17.00	54400.00
10	Welding electrodes (LH)	Nos	800.00000	22.00	17600.00
11	Use rate welding holder set	Hour	500.00000	8.93	4465.00
12	Use rate gas cutting torch set	Hour	40.00000	25.59	1023.60
13	Sundries	LS	60.00000	41.00	2460.00
Total cost of Materials				Rs:	954459.42

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	500.00000	17.29	8645.00
	Fuel / Energy charges	Hour	500.00000	101.52	50760.00
2	Pug cutting machine	Hour	85.00000	6.82	579.70
	Fuel / Energy charges	Hour	85.00000	4.22	358.70
3	Tower crane	Hour	10.00000	865.81	8658.10
	Fuel / Energy charges	Hour	10.00000	219.95	2199.50
4	Mobile crane 16 T	Hour	30.00000	2307.88	69236.40
	Fuel / Energy charges	Hour	30.00000	1758.13	52743.90
5	Stationery derrick crane	Hour	20.00000	87.15	1743.00
	Fuel / Energy charges	Hour	20.00000	0.00	0.00
6	Grinding machine	Hour	10.00000	23.83	238.30
	Fuel / Energy charges	Hour	10.00000	42.30	423.00
7	Drilling machines	Hour	30.00000	23.83	714.90
	Fuel / Energy charges	Hour	30.00000	42.30	1269.00
8	Bending machine	Hour	10.00000	43.53	435.30
	Fuel / Energy charges	Hour	10.00000	126.90	1269.00
9	Sundries	LS	50.00000	41.00	2050.00
Total hire charges of Machinery				Rs:	201323.80

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane 16 T	Hour	30.0000	833.66	25009.80
2	Crew for Tower crane	Hour	10.0000	295.36	2953.60
3	Crew for Drilling machine	Hour	30.0000	304.20	9126.00
4	Crew for Grinding machine	Hour	10.0000	304.20	3042.00
5	Crew for Bending machine	Hour	10.0000	208.26	2082.60
6	Foreman	Day	16.0000	780.00	12480.00
7	Marker / Fabricator / Erector	Day	50.0000	850.00	42500.00
8	Gas cutter	Day	8.0000	695.00	5560.00
9	Welder (General)	Day	52.0000	695.00	36140.00
10	Welder (X - ray grade)	Day	14.0000	780.00	10920.00
11	Khalasi	Day	170.0000	695.00	118150.00
12	Helper fabrication / erection	Day	230.0000	640.00	147200.00
13	Electrician	Day	4.0000	790.00	3160.00
Total cost of Labour				Rs:	418324.00

Add towards highly skilled labour charges @ 30% on total cost of labour **125497.20**
 Total Cost of Labour **543821.20**

labour component/unit qty 54382.10
 Add contractor's profit and overhead charges 13.615% 7404.10
 labour component/unit qty (including contractor's profit) **61786.20**

ABSTRACT:

A. Cost of Materials		Rs:	954459.42
B. Hire charges of Machinery		Rs:	201323.80
C. Cost of Labour		Rs:	543821.20
	Total	Rs:	1699604.42
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	1699604.42
E. Add for transportation upto work site @	3%	Rs:	50988.13
	Total	Rs:	1750592.55
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	238343.18
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		519.00
Unloading charges of fabricated parts Rs	111.58 per tonne		2231.60
Total cost for	10.000 tonne	Rs:	1991686.33
	Rate per tonne	Rs:	199168.63

VERTICAL LIFT GATES-ROPE DRUM HOIST UPTO 30 TON CAP. POWER OPERATED

IRR-GAW-2-7 Design, fabrication, supply, erection, testing and **commissioning of adequate capacity rope drum hoist** consisting of hoist platform, rope drum, gear system, electric motor, electro-magnetic brake system, hand operation assembly, control panel, wire rope, pulleys, ladder etc., with all accessories for operating river sluice / canal sluice service gate including cost of all materials, machinery, labour, , complete as per specifications and drawings with all leads and lifts (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under items in this chapter and add as applicable separately)

DATA:

RATE ANALYSIS			UNIT :	6.243 tonne wt 25 t capacity	
A. MATERIALS:					
SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel				
	Angles / beams / channels / bars	kg	1487.00000	60.00	89220.00
	Plates	kg	402.00000	66.00	26532.00
	Chequered plate	kg	290.00000	68.00	19720.00
2	Cast steel components :				
	Rope drums 2 Nos / Gears	kg	1926.00000	266.00	512316.00
	Pinions	kg	79.00000	257.00	20303.00
	Pulleys 3 Nos / Couplings 2 Nos	kg	306.00000	221.00	67626.00
	Plummer blocks / Hubs	kg	72.00000	221.00	15912.00
3	Alloy steel components				
	Shafts	kg	346.00000	264.00	91344.00
	Pins	kg	73.00000	483.00	35259.00
4	Bronze alloy components :				
	Bronze bearings / bush	kg	57.00000	1067.00	60819.00
5	Wire rope 28 mm dia 6/37 construction	kg	325.00000	203.00	65975.00
6	MS Bolt / Nut / Washer	kg	32.00000	96.00	3072.00
7	Worm reducers	No.	1.00000	222598.00	222598.00
8	Electric motor 5 hp	No.	1.00000	31517.00	31517.00
9	Manual operating system	No.	1.00000	32482.00	32482.00
10	Gate position indicator	No.	1.00000	203550.00	203550.00
11	Ele-magnetic brake	No.	1.00000	32386.00	32386.00
12	Electric cable / switch / control panel etc	LS	1.00000	54683.00	54683.00
13	Oxygen gas	cum	45.00000	48.00	2160.00
14	Acetyline gas	cum	15.00000	390.00	5850.00
15	Welding electrodes	Nos	80.00000	17.00	1360.00
16	Welding electrodes (LH)	Nos	720.00000	22.00	15840.00
17	Grease	kg	50.00000	297.00	14850.00
18	Use rate welding holder set	Hour	85.00000	8.93	759.05
19	Use rate gas cutting torch set	Hour	16.00000	25.59	409.44
20	Sundries	LS	25.00000	41.00	1025.00
Total cost of Materials				Rs:	1627567.49

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	85.00000	17.29	1469.65
	Fuel / Energy charges	Hour	53.00000	101.52	5380.56
2	Tower crane 5 t capacity	Hour	2.00000	865.81	1731.62
	Fuel / Energy charges	Hour	2.00000	219.95	439.90
3	Pug cutting machine	Hour	15.00000	6.82	102.30
	Fuel / Energy charges	Hour	15.00000	4.22	63.30
4	Mobile derrick crane	Hour	10.00000	552.23	5522.30
	Fuel / Energy charges	Hour	10.00000	506.34	5063.40
5	Grinding machine	Hour	2.00000	23.83	47.66
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
6	Drilling machines	Hour	2.00000	23.83	47.66
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
7	Sundries	LS	25.00000	41.00	1025.00
Total hire charges of Machinery				Rs:	21062.55

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane	Hour	10.00000	273.98	2739.80
2	Crew for Tower crane	Hour	2.00000	295.36	590.72
3	Crew for Drilling machine	Hour	2.00000	304.20	608.40
4	Crew for Grinding machine	Hour	2.00000	304.20	608.40
5	Foreman	Day	15.00000	780.00	11700.00
6	Marker / Fabricator / Erector	Day	19.00000	850.00	16150.00
7	Gas cutter	Day	4.00000	695.00	2780.00
8	Welder (General)	Day	8.00000	695.00	5560.00
9	Khalasi	Day	4.00000	695.00	2780.00
10	Helper fabrication / erection	Day	44.00000	640.00	28160.00
11	Electrician	Day	2.00000	790.00	1580.00
Total cost of Labour				Rs:	73257.32

Add towards highly skilled labour charges @ 30% on total cost of labour

21977.20

Total Cost of Labour

95234.52

labour component/unit qty

3809.40

Add contractor's profit and overhead charges

13.615%

518.60

labour component/unit qty (including contractor's profit)

4328.00**ABSTRACT:**

A. Cost of Materials		Rs:	1627567.49
B. Hire charges of Machinery		Rs:	21062.55
C. Cost of Labour		Rs:	95234.52
	Total	Rs:	1743864.56
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	1743864.56
E. Add for transportation upto work site @	3%	Rs:	52315.94
	Total	Rs:	1796180.50
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	244549.98
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		324.02
Unloading charges of fabricated parts Rs	111.58 per tonne		1393.18
Total cost for	6.243 tonne wt	Rs:	2042447.68
	25.000 t capacity	Rs:	
	Rate per tonne wt	Rs:	327158.05
	Rate per tonne capacity of hoist	Rs:	81697.91

HOIST BRIDGE/ WITH TRESSELS

IRR-GAW-2-8 Design, fabrication, supply, erection and **commissioning of structural steel hoist bridge** consisting of columns, beams, bracings, stiffeners, ties, chequered plate covering, hand railing, ladder etc., with all accessories for supporting rope drum hoist for operating barrage gates including cost of all materials, machinery, labour, welding, finishing, etc., complete complete as per specifications and drawings **with all leads and lifts** **(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under items in this chapter and add as applicable separately)**
Drawing No. CE/CDO/VRSP/215,216/86-87 (Vengalaraya Sagar - Gomukhi Project)

DATA:

RATE ANALYSIS

UNIT : **10.500 tonne**

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel angles/ beams / channels	kg	1494.00000	60.00	89640.00
	Structural steel plates	kg	6564.00000	66.00	433224.00
	Chequered plate	kg	2442.00000	68.00	166056.00
2	MS pipe 25 mm dia	Rm	60.00000	163.00	9780.00
3	Bolt / Nut / Washers	kg	18.00000	96.00	1728.00
4	Oxygen gas	cum	105.00000	48.00	5040.00
5	Acetyline gas	cum	35.00000	390.00	13650.00
6	Welding electrodes	Nos	3150.00000	17.00	53550.00
7	Use rate welding holder set	Hour	394.00000	8.93	3518.42
8	Use rate gas cutting torch set	Hour	105.00000	25.59	2686.95
9	Sundries	LS	50.00000	41.00	2050.00
Total cost of Materials				Rs:	780923.37

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	394.00000	17.29	6812.26
	Fuel / Energy charges	Hour	394.00000	101.52	39998.88
2	Pug cutting machine	Hour	52.00000	6.82	354.64
	Fuel / Energy charges	Hour	52.00000	4.22	219.44
3	Mobile crane 30 T	Hour	30.00000	3264.25	97927.50
	Fuel / Energy charges	Hour	30.00000	1987.99	59639.70
4	Stationary derrick crane	Hour	20.00000	87.15	1743.00
	Fuel / Energy charges	Hour	20.00000	0.00	0.00
5	Drilling machine	Hour	20.00000	23.83	476.60
	Fuel / Energy charges	Hour	20.00000	42.30	846.00
6	Grinding machine	Hour	20.00000	23.83	476.60
	Fuel / Energy charges	Hour	20.00000	42.30	846.00
7	Tower Crane	Hour	20.00000	865.81	17316.20
	Fuel / Energy charges	Hour	20.00000	219.95	4399.00
8	Sundries	LS	50.00000	41.00	2050.00
Total hire charges of Machinery				Rs:	233105.82

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane 30 T	Hour	30.00000	833.66	25009.80
2	Crew for Drilling machine	Hour	20.00000	304.20	6084.00
3	Crew for Grinding machine	Hour	20.00000	304.20	6084.00
4	Crew for Tower Crane	Hour	20.00000	295.36	5907.20
5	Foreman	Day	10.00000	780.00	7800.00
6	Marker / Fabricator / Erector	Day	50.00000	850.00	42500.00
7	Gas cutter	Day	14.00000	695.00	9730.00
8	Welder (General)	Day	53.00000	695.00	36835.00
9	Helper fabrication / erection	Day	400.00000	640.00	256000.00
10	Electrician	Day	6.00000	790.00	4740.00
Total cost of Labour				Rs:	400690.00

Add towards highly skilled labour charges @ 30% on total cost of labour

Total Cost of Labour

120207.00

520897.00

labour component/unit qty 49609.20

Add contractor's profit and overhead charges 13.615% 6754.30

labour component/unit qty (including contractor's profit) **56363.50**

ABSTRACT:

A. Cost of Materials		Rs:	780923.37
B. Hire charges of Machinery		Rs:	233105.82
C. Cost of Labour		Rs:	520897.00
	Total	Rs:	1534926.19
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	1534926.19
E. Add for transportation upto work site @	3%	Rs:	46047.79
	Total	Rs:	1580973.98
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	215249.61
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		544.96
Unloading charges of fabricated parts Rs	111.58 per tonne		2343.18
Total cost for	10.500 tonne	Rs:	1799111.73
	Rate per tonne	Rs:	171343.97

ROPE DRUM HOIST WITHOUT HOIST BRIDGE FOR BARRAGE GATES

IRR-GAW-2-9 Design, fabrication, supply, erection, testing and **commissioning of adequate capacity rope drum hoist consisting of rope drum**, pulleys, gear system, electric motor, electro-magnetic brake system, manual operation assembly, position indicator, control panel, wire rope etc., with all accessories for operating vertical lift roller gates for barrage including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc., **complete with all leads and lifts.**

DATA:

RATE ANALYSISUNIT : **5.069 tonne wt****A. MATERIALS:****50.00 t capacity**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel				
	Angles / beams / channels / bars	kg	420.00000	60.00	25200.00
	Plates	kg	225.00000	66.00	14850.00
2	Cast steel components :				
	Rope drums 2 Nos / Gears	kg	1290.00000	266.00	343140.00
	Pinions	kg	98.00000	257.00	25186.00
	Pulleys 3 Nos / Couplings 2 Nos	kg	650.00000	221.00	143650.00
	Plummer blocks / Hubs	kg	250.00000	221.00	55250.00
3	Alloy steel components				
	Shafts / Keys	kg	350.00000	264.00	92400.00
	Pins	kg	96.00000	483.00	46368.00
4	Bronze alloy components :				
	Bronze bearings / bush	kg	100.00000	1067.00	106700.00
5	Wire rope 28 mm dia 6/37	kg	435.00000	203.00	88305.00
6	MS Bolt / Nut / Washer	kg	26.00000	96.00	2496.00
7	Worm reducers	No.	1.00000	222598.00	222598.00
8	Electric motor 12.5 hp	No.	1.00000	69463.00	69463.00
9	Manual operating system	No.	1.00000	32482.00	32482.00
10	Gate position indicator	No.	1.00000	203550.00	203550.00
11	Ele-magnetic brake	No.	1.00000	32386.00	32386.00
12	Electric cable / switch / control panel	LS	1.00000	54683.00	54683.00
13	Oxygen gas	cum	30.00000	48.00	1440.00
14	Acetyline gas	cum	10.00000	390.00	3900.00
15	Welding electrodes	Nos	44.00000	17.00	748.00
16	Welding electrodes (LH)	Nos	392.00000	22.00	8624.00
17	Grease	kg	50.00000	297.00	14850.00
18	Use rate welding holder set	Hour	47.00000	8.93	419.71
19	Use rate gas cutting torch set	Hour	12.00000	25.59	307.08
20	Sundries	LS	25.00000	41.00	1025.00
Total cost of Materials				Rs:	1590020.79

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	47.00000	17.29	812.63
	Fuel / Energy charges	Hour	47.00000	101.52	4771.44
2	Tower crane 5 t capacity	Hour	2.00000	865.81	1731.62
	Fuel / Energy charges	Hour	2.00000	219.95	439.90
3	Pug cutting machine	Hour	9.00000	6.82	61.38
	Fuel / Energy charges	Hour	9.00000	4.22	37.98
4	Mobile derrick crane	Hour	10.00000	552.23	5522.30
	Fuel / Energy charges	Hour	10.00000	506.34	5063.40
5	Grinding machine	Hour	2.00000	23.83	47.66
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
6	Drilling machines	Hour	2.00000	23.83	47.66
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
7	Sundries	LS	25.00000	41.00	1025.00
Total hire charges of Machinery				Rs:	19730.17

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Mobile crane	Hour	10.00000	273.98	2739.80
2	Crew for Tower crane	Hour	2.00000	295.36	590.72
3	Crew for Drilling machine	Hour	2.00000	304.20	608.40
4	Crew for Grinding machine	Hour	2.00000	304.20	608.40
5	Foreman	Day	13.00000	780.00	10140.00
6	Marker / Fabricator / Erector	Day	17.00000	850.00	14450.00
7	Gas cutter	Day	3.00000	695.00	2085.00
8	Welder (General)	Day	5.00000	695.00	3475.00
9	Khalasi	Day	4.00000	695.00	2780.00
10	Helper fabrication / erection	Day	36.00000	640.00	23040.00
11	Electrician	Day	2.00000	790.00	1580.00
Total cost of Labour				Rs:	62097.32

Add towards highly skilled labour charges @ 30% on total cost of labour

18629.20

Total Cost of Labour

80726.52

labour component/unit qty	1614.50
Add contractor's profit and overhead charges 13.615%	219.80
labour component/unit qty (including contractor's profit)	1834.30

ABSTRACT:

A. Cost of Materials		Rs:	1590020.79
B. Hire charges of Machinery		Rs:	19730.17
C. Cost of Labour		Rs:	80726.52
	Total	Rs:	1690477.48
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	1690477.48
E. Add for transportation upto work site @	3%	Rs:	50714.32
	Total	Rs:	1741191.80
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	237063.26
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		263.08
Unloading charges of fabricated parts Rs	111.58 per tonne		1131.2
Total cost for	5.069 tonne wt	Rs:	1979649.34
	50.000 t capacity	Rs:	
	Rate per tonne wt	Rs:	390540.41
	Rate per tonne capacity of hoist	Rs:	39592.99

SCREW GEAR HOISTS including plat form(UPTO 10 TON CAP)

IRR-GAW-2-10

Design, fabrication, supply, erection, testing and **commissioning of adequate capacity screw gear type hoist** consisting of supporting structure, platform, ladder etc., with all accessories for operating canal escape / regulator gate including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc., complete with all leads and lifts. (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under items in this chapter and add as applicable separately)

DATA:

RATE ANALYSISUNIT : **0.871 tonne**
3.00 t capacity**A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel				
	Angles / beams / channels / bars	kg	402.00000	60.00	24120.00
	Plates	kg	145.00000	66.00	9570.00
	Chequered plate	kg	176.00000	68.00	11968.00
2	Cast iron components :				
	Hoist body / Lock nut / Main nut	kg	55.00000	266.00	14630.00
3	Alloy steel components				
	Hoist stem	kg	75.00000	264.00	19800.00
4	Bronze alloy components :				
	Thrust bearings	kg	4.00000	1067.00	4268.00
5	MS Bolt / Nut / Washer	kg	8.00000	96.00	768.00
6	Oxygen gas	cum	18.00000	48.00	864.00
7	Acetyline gas	cum	6.00000	390.00	2340.00
8	Welding electrodes	Nos	7.00000	17.00	119.00
9	Welding electrodes (LH)	Nos	66.00000	22.00	1452.00
10	Grease	kg	2.00000	297.00	594.00
11	Use rate welding holder set	Hour	8.00000	8.93	71.44
12	Use rate gas cutting torch set	Hour	11.00000	25.59	281.49
13	Sundries	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	90927.93

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	8.00000	17.29	138.32
	Fuel / Energy charges	Hour	5.00000	101.52	507.60
2	Grinding machine	Hour	2.00000	23.83	47.66
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
3	Drilling machines	Hour	2.00000	23.83	47.66
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
4	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	992.44

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling machine	Hour	2.00000	304.20	608.40
2	Crew for Grinding machine	Hour	2.00000	304.20	608.40
3	Foreman	Day	4.00000	780.00	3120.00
4	Marker / Fabricator / Erector	Day	5.00000	850.00	4250.00
5	Gas cutter	Day	2.00000	695.00	1390.00
6	Welder (General)	Day	1.00000	695.00	695.00
7	Helper fabrication / erection	Day	9.00000	640.00	5760.00
8	Electrician	Day	0.50000	790.00	395.00
Total cost of Labour				Rs:	16826.80

Add towards highly skilled labour charges @ 30% on total cost of labour

5048.04

Total Cost of Labour

21874.84

labour component/unit qty

7291.60

Add contractor's profit and overhead charges

13.615% 992.80

labour component/unit qty (including contractor's profit)

8284.40**ABSTRACT:**

A. Cost of Materials

Rs: 90927.93

B. Hire charges of Machinery

Rs: 992.44

C. Cost of Labour

Rs: 21874.84

Total

Rs: 113795.21

D. Add for excise duty

0.00%

Rs: 0.00

(on 75 percent cost excluding cost of materials)

Total

Rs: 113795.21

E. Add for transportation upto work site @

3%

Rs: 3413.86

Total

Rs: 117209.07

F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	15958.01
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		45.20
Unloading charges of fabricated parts Rs	111.58 per tonne		194.38
Total cost for	0.871 tonne	Rs:	133406.66
	3.000 t capacity	Rs:	
	Rate per tonne	Rs:	153164.94
	Rate per tonne capacity	Rs:	44468.89

MANUAL OPERATED ROPE DRUM HOISTS

IRR-GAW-2-11 Design, fabrication, supply, erection, testing and **commissioning of adequate capacity manually operated rope drum hoist** consisting of hoist platform, rope drum, gear system, brake system, wire rope, ladder etc., with all accessories for operating canal regulator radial gate including cost of all materials, machinery, labour, welding, finishing, cleaning, .. complete **with all leads and lifts**

DATA:

A. MATERIALS:		RATE ANALYSIS		UNIT :	2.804	tonne
Sl No	particulars	Unit	Quantity	Rate in Rs.	10.00	t capacity
1	Structural steel					
	Angles / beams / channels / bars	kg	1229.00000	60.00		73740.00
	Plates	kg	453.00000	66.00		29898.00
	Chequered plate	kg	195.00000	68.00		13260.00
2	Cast steel components :					
	Rope drums 2 Nos / Gears	kg	384.00000	266.00		102144.00
	Pinions	kg	14.00000	257.00		3598.00
	Pulleys 6 Nos	kg	108.00000	221.00		23868.00
	Plummer blocks / Couplings	kg	47.00000	221.00		10387.00
3	Alloy steel components					
	Shafts	kg	75.00000	264.00		19800.00
	Pins	kg	24.00000	483.00		11592.00
4	Bronze alloy components :					
	Bronze bearings / bush	kg	11.00000	1067.00		11737.00
5	Wire rope 12 mm dia 6/36 construction	kg	42.00000	203.00		8526.00
6	MS Bolt / Nut / Washer	kg	64.00000	96.00		6144.00
7	Worm reducers	No.	1.00000	222598.00		222598.00
8	Manual operating system	No.	1.00000	32482.00		32482.00
9	Brake	No.	1.00000	32386.00		32386.00
10	Wire rope sockets	No	2.00000	5446.00		10892.00
11	Oxygen gas	cum	75.00000	48.00		3600.00
12	Acetyline gas	cum	25.00000	390.00		9750.00
13	Welding electrodes	Nos	69.00000	17.00		1173.00
14	Welding electrodes (LH)	Nos	622.00000	22.00		13684.00
15	Grease	kg	10.00000	297.00		2970.00
16	Use rate welding holder set	Hour	73.00000	8.93		651.89
17	Use rate gas cutting torch set	Hour	42.00000	25.59		1074.78
18	Sundries	LS	25.00000	41.00		1025.00
		Total cost of Materials		Rs:		646980.67

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	73.00000	17.29	1262.17
	Fuel / Energy charges	Hour	46.00000	101.52	4669.92
2	Pug cutting machine	Hour	8.00000	6.82	54.56
	Fuel / Energy charges	Hour	8.00000	4.22	33.76
3	Mobile derrick crane	Hour	4.00000	552.23	2208.92
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
4	Stationery derrick crane	Hour	8.00000	87.15	697.20
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
5	Grinding machine	Hour	8.00000	23.83	190.64
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
6	Drilling machines	Hour	16.00000	23.83	381.28
	Fuel / Energy charges	Hour	16.00000	42.30	676.80
7	Sundries	LS	25.00000	41.00	1025.00
	Total hire charges of Machinery			Rs:	13564.01

C. LABOUR:

SI No	Description	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Crew for Mobile crane	Hour	4.00000	273.98	1095.92
2	Crew for Drilling machine	Hour	16.00000	304.20	4867.20
3	Crew for Grinding machine	Hour	8.00000	304.20	2433.60
4	Foreman	Day	14.00000	780.00	10920.00
5	Marker / Fabricator / Erector	Day	20.00000	850.00	17000.00
6	Gas cutter	Day	6.00000	695.00	4170.00
7	Welder (General)	Day	7.00000	695.00	4865.00
8	Helper fabrication / erection	Day	44.00000	640.00	28160.00
9	Electrician	Day	2.00000	790.00	1580.00
Total cost of Labour				Rs:	75091.72

Add towards highly skilled labour charges @ 30% on total cost of labour

22527.52

Total Cost of Labour

97619.24

labour component/unit qty 9761.90

Add contractor's profit and overhead charges 13.615% 1329.10

labour component/unit qty (including contractor's profit) **11091.00****ABSTRACT:**

A. Cost of Materials		Rs:	646980.67
B. Hire charges of Machinery		Rs:	13564.01
C. Cost of Labour		Rs:	97619.24
	Total	Rs:	758163.92
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	758163.92
E. Add for transportation upto work site @	3%	Rs:	22744.92
	Total	Rs:	780908.84
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	106320.74
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		145.52
Unloading charges of fabricated parts Rs	111.58 per tonne		625.74
Total cost for	2.804 tonne	Rs:	888000.84
	10.000 t capacity		
	Rate per tonne	Rs:	316690.74
	Rate per tonne	Rs:	88800.08
	capacity of hoist		

IRR-GAW-2-12

New Item
2015-16-2

OT SLUICE SHUTTERS Screw Gear Hoist Including Platform for below 5 Tons Capacity (Small Gates)

As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad Specification drawing for Krishna Delta System

Fabrication, supply, erection, testing and commissioning of Embedded parts consisting of supporting structure, platform etc. with all accessories for operating canal escape/ regulator gate with all accessories including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc. complete as per Specification and approved drawings

(without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

DATA:

RATE ANALYSISUNIT : **0.869 tonne****A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel angles/ beams / chan	kg	445.78000	60.00	26746.80
2	Structural steel plates	kg	28.00000	66.00	1848.00
3	Chequered plate	kg	144.80000	68.00	9846.40
	Cast iron Components				
4	Hoist Body/lock nut/Main Nut etc.	Kg	83.00000	266.00	22078.00
	Bronze Alloy Steel Components				
5	Thrust Bearings	kg	3.00000	1067.00	3201.00
6	MS Bolt/Nut/ Washer	kg	16.00000	96.00	1536.00
7	Oxygen gas	cum	21.00000	48.00	1008.00
8	Acetyline gas	cum	7.00000	390.00	2730.00
9	Welding electrodes	Nos	200.00000	17.00	3400.00
10	Welding electrodes (LH)	Nos	40.00000	22.00	880.00
11	Use rate welding holder set	Hour	72.00000	8.93	642.96
12	Use rate gas cutting torch set	Hour	36.00000	25.59	921.24
13	Sundries	LS	20.00000	41.00	820.00
Total cost of Materials				Rs:	75658.40

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	30.00000	17.29	518.70
	Fuel / Energy charges	Hour	30.00000	101.52	3045.60
2	Pug cutting machine	Hour	12.00000	6.82	81.84
	Fuel / Energy charges	Hour	12.00000	4.22	50.64
3	Drilling machine	Hour	8.00000	23.83	190.64
	Fuel / Energy charges	Hour	8.00000	42.30	338.40
4	Grinding machine	Hour	36.00000	23.83	857.88
	Fuel / Energy charges	Hour	36.00000	42.30	1522.80
5	Lathe machine (Screw Rod M/C)	Hour	16.00000	300.00	4800.00
6	Sundries	LS	10.00000	41.00	410.00
Total hire charges of Machinery				Rs:	11816.50

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling machine	Hour	8.00000	304.20	2433.60
2	Crew for Grinding machine	Hour	36.00000	304.20	10951.20
3	Foreman	Day	2.00000	780.00	1560.00
4	Marker / Fabricator / Erector	Day	10.00000	850.00	8500.00
5	Gas cutter	Day	4.00000	695.00	2780.00
6	Welder (General)	Day	4.00000	695.00	2780.00
7	Mazdoors	Day	6.00000	595.00	3570.00
8	Helper fabrication / erection	Day	6.00000	640.00	3840.00
Total cost of Labour				Rs:	36414.80

labour component/unit qty 36414.80
 Add contractor's profit and overhead charges 13.615% 4957.90
 labour component/unit qty (including contractor's profit) **41372.70**

ABSTRACT:

A. Cost of Materials		Rs:	75658.40
B. Hire charges of Machinery		Rs:	11816.50
C. Cost of Labour		Rs:	36414.80
	Total	Rs:	123889.70
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	123889.70
E. Add for transportation upto work site @	3%	Rs:	3716.69
	Total	Rs:	127606.39
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	17373.61
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		45.1
Unloading charges of fabricated parts Rs	111.58 per tonne		193.92
Total cost for	0.869 tonne	Rs:	145219.02
Rate per tonne		Rs:	167110.49

OT SLUICE SHUTTERS EM parts for Below 5 Tons capacity (small gates)

As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad Specification drawing for Krishna Delta System

Fabrication, supply, erection, testing and commissioning of Embedded parts consisting of sil beam, slide tracks, seal seats, Guide plates etc. with all accessories including cost of all materials, machinery, labour, etc. complete as per specifications and approved drawings.

(without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

Use rate of materials :

Cost of we	8927.00 / Each	R	8927.00
Life of welding set			1000 hours
Use rate o (cost / life)		R	8.93
Cost of ga:	15355.00 / Each	R	15355.00
Life of gas cutting set			600 hours
Use rate o (cost / life)		R	25.59
Height of EM parts: 5.4 M		Gate Size:	0.99 X 0.875 M

DATA:

RATE ANALYSIS

UNIT : **1.334 tonne**

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel angles/ beams / channels	kg	440.57000	60.00	26434.20
2	Structural steel plates	kg	869.00000	66.00	57354.00
3	Stainless Steel Flats	kg	25.12000	292.00	7335.04
4	Oxygen gas	cum	12.00000	48.00	576.00
5	Acetyline gas	cum	4.00000	390.00	1560.00
6	Welding electrodes	Nos	210.00000	17.00	3570.00
7	Welding electrodes (Stainless Steel)	Nos	30.00000	27.00	810.00
8	Use rate welding holder set	Hour	62.00000	8.93	553.66
9	Use rate gas cutting torch set	Hour	32.00000	25.59	818.88
10	Sundries	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	99134.78

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	30.00000	17.29	518.70
	Fuel / Energy charges	Hour	30.00000	101.52	3045.60
2	Pug cutting machine	Hour	20.00000	6.82	136.40
	Fuel / Energy charges	Hour	20.00000	4.22	84.40
3	Drilling machine	Hour	4.00000	23.83	95.32
	Fuel / Energy charges	Hour	4.00000	42.30	169.20
4	Grinding machine	Hour	20.00000	23.83	476.60
	Fuel / Energy charges	Hour	20.00000	42.30	846.00
5	Sundries	LS	3.00000	41.00	123.00
Total hire charges of Machinery				Rs:	5495.22

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling machine	Hour	4.00000	304.20	1216.80
2	Crew for Grinding machine	Hour	20.00000	304.20	6084.00
3	Foreman	Day	8.00000	780.00	6240.00
4	Marker / Fabricator / Erector	Day	6.00000	850.00	5100.00
5	Gas cutter	Day	2.00000	695.00	1390.00
6	Welder (General)	Day	4.00000	695.00	2780.00
7	Mazdoors	Day	4.00000	595.00	2380.00
8	Helper fabrication / erection	Day	8.00000	640.00	5120.00
Total cost of Labour				Rs:	30310.80

labour component/unit qty 30310.80

Add contractor's profit and overhead charges 13.615% 4126.80

labour component/unit qty (including contractor's profit) **34437.60**

ABSTRACT:

A. Cost of Materials		Rs:	99134.78
B. Hire charges of Machinery		Rs:	5495.22
C. Cost of Labour		Rs:	30310.80
	Total	Rs:	134940.80
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	134940.80
E. Add for transportation upto work site @	3%	Rs:	4048.22
	Total	Rs:	138989.02
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	18923.36
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		69.24
Unloading charges of fabricated parts Rs	111.58 per tonne		297.7
Total cost for	1.334 tonne	Rs:	158279.32
	Rate per tonne	Rs:	118650.16

IRR-GAW-2-
14
New Item
2015-16 -4

OT SLUICE SHUTTERS for Below 5 Tons capacity (small gates)

As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad Specification drawing for Krishna Delta System

Fabrication, supply, erection, testing and commissioning of Sluice Shutters consisting of skin plate, horizontal and vertical angles, stiffeners, rubber seals, clamps with all accessories for sluice shutters including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings

(without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

Gate Size: 0.99 X 0.875 M

DATA:

RATE ANALYSIS

UNIT : **0.161 tonne**

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Structural steel angles/ beams / channels	kg	63.72000	60.00	3823.20
2	Structural steel plates	kg	96.50000	66.00	6369.00
3	GI Bolts/Nut/Washer	kg	20.00000	146.00	2920.00
	Rubber Seals				
4	Bottom Seal	Rm	0.82000	731.00	599.42
5	Side Seal/ Top Seal	Rm	1.75000	1201.00	2101.75
6	Oxygen gas	cum	15.00000	48.00	720.00
7	Acetyline gas	cum	5.00000	390.00	1950.00
8	Welding electrodes	Nos	110.00000	17.00	1870.00
9	Use rate welding holder set	Hour	30.00000	8.93	267.90
10	Use rate gas cutting torch set	Hour	12.00000	25.59	307.08
11	Sundries	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	21051.35

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Welding transformer	Hour	14.00000	17.29	242.06
	Fuel / Energy charges	Hour	14.00000	101.52	1421.28
2	Pug cutting machine	Hour	4.00000	6.82	27.28
	Fuel / Energy charges	Hour	4.00000	4.22	16.88
3	Drilling machine	Hour	2.00000	23.83	47.66
	Fuel / Energy charges	Hour	2.00000	42.30	84.60
4	Grinding machine	Hour	4.00000	23.83	95.32
	Fuel / Energy charges	Hour	4.00000	42.30	169.20
5	Sundries	LS	3.00000	41.00	123.00
Total hire charges of Machinery				Rs:	2227.28

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Drilling machine	Hour	2.00000	304.20	608.40
2	Crew for Grinding machine	Hour	4.00000	304.20	1216.80
3	Foreman	Day	2.00000	780.00	1560.00
4	Marker / Fabricator / Erector	Day	3.00000	850.00	2550.00
5	Gas cutter	Day	1.00000	695.00	695.00
6	Welder (General)	Day	4.00000	695.00	2780.00
7	Mazdoors	Day	4.00000	595.00	2380.00
8	Helper fabrication / erection	Day	6.00000	640.00	3840.00
Total cost of Labour				Rs:	15630.20

labour component/unit qty 15630.20
 Add contractor's profit and overhead charges 13.615% 2128.10
 labour component/unit qty (including contractor's profit) **17758.30**

ABSTRACT:

A. Cost of Materials		Rs:	21051.35
B. Hire charges of Machinery		Rs:	2227.28
C. Cost of Labour		Rs:	15630.20
	Total	Rs:	38908.83
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	38908.83
E. Add for transportation upto work site @	3%	Rs:	1167.26
	Total	Rs:	40076.09
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	5456.36
Add 2 leads			
Add 1 km lead charges for fabricated parts	25.95 per tonne		8.36
Unloading charges of fabricated parts Rs	111.58 per tonne		35.92
Total cost for	0.161 tonne	Rs:	45576.73
	Rate per tonne	Rs:	283085.28

IRR-GAW-3 **SAND BLASTING AND PAINTING AS PER IS:14177-1994**

IRR-GAW-3-1 **Cleaning gates / hoists / embedded parts/lifting beams** etc, to expose fresh metal surface for painting **by sand blasting method** as per specifications including cost of all materials, labour, machinery, scaffolding, etc., complete **with initial lead for sand upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT : 100

sqm

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Sand (Screened)	cum	30.00000	728.00	21840.00
2	Use rate of air hose	Hour	8.00000	18.44	147.52
3	Use rate of sand blast gun nozzle	Hour	8.00000	3.89	31.12
4	Sundries(Rust inhibitive, seive etc)	LS	5.00000	41.00	205.00
Total					22223.64
Add 10% towards scaffolding/laddor @				0.10	2222.36
Total cost of Materials				Rs:	24446.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Air compressor 7 cmm diesel	Hour	8.00000	237.70	1901.60
	Fuel / Energy charges	Hour	8.00000	1205.58	9644.64
2	Sand blasting equipment	Hour	8.00000	123.76	990.08
	Fuel / Energy charges	Hour	8.00000	0.00	0.00
Total hire charges of Machinery				Rs:	12536.32

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Air compressor	Hour	8.00000	333.22	2665.76
2	Crew for Sand blasting equipment	Hour	8.00000	347.10	2776.80
3	mazdoor	Day	15.00000	595.00	8925.00
Total cost of Labour				Rs:	14367.56

labour component/unit qty 14370
 Add contractor's profit and overhead charges 13.615% 19.60
 labour component/unit qty (including contractor's profit) **163.30**

ABSTRACT:

A. Cost of Materials		Rs:	24446.00
B. Hire charges of Machinery		Rs:	12536.32
C. Cost of Labour		Rs:	14367.56
	Total	Rs:	51349.88
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	51349.88
E. Add for transportation upto work site @	3%	Rs:	1540.50
	Total	Rs:	52890.38
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	7201.03
Total cost for	100.00 sqm	Rs:	60091.41
	Rate per sqm	Rs:	600.91

IRR-GAW-3-2 **Painting of embedded metal parts** and all types of gates, stoplogs, etc, on sand blasted surfaces with one coat of inorganic zinc silicate (airless spray preferred) 70+/- 5 and two super coats with a total thickness of 300 microns (each 150+/- 5) of solventless coal tar epoxy paint each coat 150 microns (total 300 microns) cost of all materials, labour, scaffolding etc., complete **with all leads and all lifts**

(Upstream surface of gates portion may be painted with solventless coal tar epoxy brown paint instead of solventless coal tar black. The rate for coal tar epoxy brown shall be adopted in data for Upstream side painting)

DATA:

RATE ANALYSISUNIT : **100 sqm****A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Inorganic zinc silicate	ltr	12.00000	643.00	7716.00
2	Thinner @ 10%	ltr	1.20000	113.00	135.60
3	Solventless Coal tar epoxy paint	ltr	40.00000	310.00	12400.00
4	Thinner @ 10%	ltr	4.00000	113.00	452.00
5	Sundries (brushes, ladders, platforms etc)	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	20826.60

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hire Charges of Airless Spray Gun	Hr	6.00000	123.07	738.42
2	Hire Charges of Air Compressor-7 Cmm (diesel)	Hr	6.00000	237.70	1426.20
3	Fuel Charges of Air Compressor	Hr	6.00000	1205.58	7233.48
Total cost of Machinery				Rs:	9398.10

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew Charges of Air Compressor	Day	6.00000	333.22	1999.32
2	Painter Class-I	Day	20.00000	795.00	15900.00
3	Helper	Day	20.00000	595.00	11900.00
Total cost of Labour				Rs:	29799.32

labour component/unit qty 298.00

Add contractor's profit and overhead charges 13.615% 40.60

labour component/unit qty (including contractor's profit) **338.60****ABSTRACT:**

A. Cost of Materials		Rs:	20826.60
B. Hire charges of Machinery		Rs:	9398.10
C. Cost of Labour		Rs:	29799.32
	Total	Rs:	60024.02
D. Add for excise duty	0	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	60024.02
E. Add for transportation upto work site @	0.03	Rs:	1800.72
	Total	Rs:	61824.74
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	8417.44
Total cost	100.00 sqm	Rs:	70242.18
	Rate per sqm	Rs:	702.42

IRR-GAW-3-3 **Painting of Lifting beams,cat walks and other similar structures**-painting hoist machinery, on sand blasted surfaces with two coats of zinc phosphate primer (airless spray preferred) 40microns/coat and two coats of alkyd based micaceous iron oxide paint , 65 microns/coat cost of all materials, labour, scaffolding etc., complete **with all leads and all lifts**

DATA:

RATE ANALYSISUNIT : **100 sqm****A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	zinc phosphate primer	ltr	28.00000	237.00	6636.00
2	Thinner@10%	ltr	2.80000	113.00	316.40
3	alkyd based micaceous iron oxide paint	ltr	20.00000	170.00	3400.00
4	Thinner@10%	ltr	2.00000	113.00	226.00
5	Sundries (brushes,ladders,platforms etc)	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	10701.40

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hire Charges of Airless Spray Gun	Hr	6.00000	123.07	738.42
2	Hire Charges of Air Compressor-7 Cmm (diesel)	Hr	6.00000	237.70	1426.20
3	Fuel Charges of Air Compressor	Hr	6.00000	1205.58	7233.48
Total cost of machinery				RS:	9398.10

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew Charges of Air Compressor	Day	6.00000	333.22	1999.32
2	Painter Class-I	Day	15.00000	795.00	11925.00
3	Helper	Day	15.00000	595.00	8925.00
Total cost of Labour				Rs:	22849.32

labour component/unit qty 228.50
 Add contractor's profit and overhead charges 13.615% 31.10
 labour component/unit qty (including contractor's profit) **259.60**

ABSTRACT:

A. Cost of Materials		Rs:	10701.40
B. Hire charges of Machinery		Rs:	9398.10
C. Cost of Labour		Rs:	22849.32
	Total	Rs:	42948.82
D. Add for excise duty	0	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	42948.82
E. Add for transportation upto work site @	0.03	Rs:	1288.46
	Total	Rs:	44237.28
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	6022.91
Total cost for	100.00 sqm	Rs:	50260.19
	Rate per sqm	Rs:	502.60

IRR-GAW-3-4 **HOISTS:STRUCTURAL COMPONENTS--painting structurals on sand blasted surfaces with** two coats of zinc phosphate primer (airless spray preferred) 40microns/coat and one coat 65+/-5 of alkyd based micaceous iron oxide paint followed by two coats of synthetic enamel paint 25 microns/coat cost of all materials, labour, scaffolding etc., complete with all leads and **all lifts**

DATA:

RATE ANALYSISUNIT : Gates and Allied Works - Item Unit Rates 2024-25
100 sqm**A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	zinc phosphate primer	ltr	28.00000	237.00	6636.00
2	Thinner@10%	ltr	2.80000	113.00	316.40
3	alkyd based micaceous iron oxide paint	ltr	15.00000	170.00	2550.00
4	Thinner@10%	ltr	1.50000	113.00	169.50
5	synthetic enamel paint	ltr	17.00000	265.00	4505.00
6	Thinner@10%	ltr	1.70000	113.00	192.10
7	Sundries (brushes,ladders,platforms etc)	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	14492.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hire Charges of Airless Spray Gun	Hr	6.00000	123.07	738.42
2	Hire Charges of Air Compressor-7 Cmm (diesel)	Hr	6.00000	237.70	1426.20
3	Fuel Charges of Air Compressor	Hr	6.00000	1205.58	7233.48
Total cost of Machinery				Rs:	9398.10

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew Charges of Air Compressor	Day	6.00000	333.22	1999.32
2	Painter Class-I	Day	20.00000	795.00	15900.00
3	Helper	Day	20.00000	595.00	11900.00
Total cost of Labour				Rs:	29799.32

labour component/unit qty 298.00

Add contractor's profit and overhead charges 13.615% 40.60

labour component/unit qty (including contractor's profit) **338.60****ABSTRACT:**

A. Cost of Materials		Rs:	14492.00
B. Hire charges of Machinery		Rs:	9398.10
C. Cost of Labour		Rs:	29799.32
	Total	Rs:	53689.42
D. Add for excise duty	0	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	53689.42
E. Add for transportation upto work site @	0.03	Rs:	1610.68
	Total	Rs:	55300.10
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	7529.11
Total cost for 100.00 sqm		Rs:	62829.21
Rate per sqm		Rs:	628.29

IRR-GAW-3-5 **HOISTS:machineryCOMPONENTS--painting hoist machinery, on sand blasted surfaces** with one coats of zinc phosphate primer (airless spray preferred) 50microns/coat and three coats of aluminium paint or synthetic enamel , 25 microns/coat cost of all materials, labour, scaffolding etc., complete with all leads and **all lifts**

DATA:

RATE ANALYSISUNIT : **100 sqm****A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	zinc phosphate primer	ltr	14.00000	237.00	3318.00
2	Thinner@10%	ltr	1.40000	113.00	158.20
3	aluminium paint or synthetic enamel per coat	ltr	26.00000	265.00	6890.00
4	Thinner@10%	ltr	2.60000	113.00	293.80
5	Sundries (brushes,ladders,platforms etc)	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	10783.00

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hire Charges of Airless Spray Gun	Hr	6.00000	123.07	738.42
2	Hire Charges of Air Compressor-7 Cmm (diesel)	Hr	6.00000	237.70	1426.20
3	Fuel Charges of Air Compressor	Hr	6.00000	1205.58	7233.48
Total cost of Machinery				Rs:	9398.10

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew Charges of Air Compressor	Day	6.00000	333.22	1999.32
2	Painter Class-I	Day	20.00000	795.00	15900.00
3	Helper	Day	20.00000	595.00	11900.00
Total cost of Labour				Rs:	29799.32

labour component/unit qty 298.00

Add contractor's profit and overhead charges 13.615% 40.60

labour component/unit qty (including contractor's profit) **338.60****ABSTRACT:**

A. Cost of Materials		Rs:	10783.00
B. Hire charges of Machinery		Rs:	9398.10
C. Cost of Labour		Rs:	29799.32
	Total	Rs:	49980.42
D. Add for excise duty	0	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	49980.42
E. Add for transportation upto work site @	0.03	Rs:	1499.41
	Total	Rs:	51479.83
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	7008.98
Total cost for	100.00 sqm	Rs:	58488.81
	Rate per sqm	Rs:	584.89

IRR-GAW-4

PAINTING WITHOUT SAND BLASTING**IRR-GAW-4-1 E.M Parts for ALL TYPES OF GATES**

Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning, applying primary coat with **one** coat of **Protective Mastic** to athickness of 70±5 microns ,followed by finishing coats **2 coats** with Solventless Coal tar epoxy each coat with a DFT of 150±5 microns and total DFT of all coats including Primary coat should not be less than 350 microns with material, labour and all accessories with all leads and lifts

(in respect of Heavily rusted (30 to 40% rusted) surfaces)

DATA:

RATE ANALYSISUNIT : **100.000 Sq.m****A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rust cleaner / inhibitor	ltr	13.00000	150.00	1950.00
2	Protective Mastic	ltr	25.00000	543.00	13575.00
3	Thinner@10%	ltr	2.50000	113.00	282.50
4	Solventless Coal tar epoxy paint	ltr	40.00000	310.00	12400.00
5	Thinner@10%	ltr	4.00000	113.00	452.00
6	Wire brush	Nc	2.00000	49.00	98.00
7	Sundries	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	28880.50

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hire Charges of Airless Spray Gun	Hr	6.00000	123.07	738.42
2	Hire Charges of Air Compressor-7 Cmm (diesel)	Hr	6.00000	237.70	1426.20
3	Fuel Charges of Air Compressor	Hr	6.00000	1205.58	7233.48
Total cost of Machinery				Rs:	9398.10

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew Charges of Air Compressor	Day	6.00000	333.22	1999.32
2	Painter Class-I	Day	20.00000	795.00	15900.00
3	Helper	Day	20.00000	595.00	11900.00
Total cost of Labour				Rs:	29799.32

labour component/unit qty 298.00
 Add contractor's profit and overhead charges 13.615% 40.60
 labour component/unit qty (including contractor's profit) **338.60**

ABSTRACT:

A. Cost of Materials		Rs:	28880.50
B. Hire charges of Machinery		Rs:	9398.10
C. Cost of Labour		Rs:	29799.32
	Total	Rs:	68077.92
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	68077.92
E. Add for transportation upto work site @	3%	Rs:	2042.34
	Total	Rs:	70120.26
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs:	9546.87
Total cost for	100.00 sqm	Rs:	79667.13
	Rate per sq.meter	Rs:	796.67

IRR-GAW-4-3 HOIST BRIDGES ,HOISTING EQUIPMENT AND CRANES,Etc,

Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning,applying primary coat with **two** coats of Zinc chromite red oxide primer , followed by finishing coats **3 coats** with synthetic enamel paint with material, labour,and all accessories with all leads and lifts where surface cleaning by sand blasting is not feasible and based on specific recommendations of designers, it is to adopt surface preperation done manually by hand and power tool after cleaning by chemical treatment to remove grease, rust, scaling etc., and to form phasphate coating to prevent further rusting, before applying primer painting.

DATA:

RATE ANALYSISUNIT : **100.000 Sq.m****A. MATERIALS:**

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rust cleaner / inhibitor	ltr	13.00000	150.00	1950.00
2	Zinc Chromite Red Oxide Primer	ltr	28.00000	192.00	5376.00
3	Thinner@10%	ltr	2.80000	113.00	316.40
4	Synthetic enamel Paint	ltr	17.00000	265.00	4505.00
5	Thinner@10%	ltr	1.70000	113.00	192.10
6	Wire brush	Nc	2.00000	49.00	98.00
7	Sundries	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	12560.50

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hire Charges of Airless Spray Gun	Hr	6.00000	123.07	738.42
2	Hire Charges of Air Compressor-7 Cmm (diesel)	Hr	6.00000	237.70	1426.20
3	Fuel Charges of Air Compressor	Hr	6.00000	1205.58	7233.48
Total cost of Machinery				Rs:	9398.10

C. LABOUR

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew Charges of Air Compressor	Day	6.00000	333.22	1999.32
2	Painter Class-I	Day	20.00000	795.00	15900.00
3	Helper	Day	20.00000	595.00	11900.00
Total cost of Labour				Rs:	29799.32

labour component/unit qty 298.00
 Add contractor's profit and overhead charges 13.615% 40.60
 labour component/unit qty (including contractor's profit) **338.60**

ABSTRACT:

A. Cost of Materials		Rs.	12560.50
B. Hire charges of Machinery		Rs.	9398.10
C. Cost of Labour		Rs.	29799.32
	Total	Rs.	51757.92
D. Add for excise duty	0.00%	Rs.	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs.	51757.92
E. Add for transportation upto work site @	3%	Rs.	1552.74
	Total	Rs.	53310.66
F. Add for contractor's profit and overheads on (A+B+C+D+E)	13.615%	Rs.	7258.25
Total cost for	100.00 sqm	Rs.	60568.91
	Rate per sq.meter		605.69

WALK WAYS(CAT WALKS), LIFTING BEAMS,etc,

IRR-GAW-4-4 **Surface cleaning of metal surfaces by chemical cleaners** and then by hand and power tool cleaners and removing dust. After cleaning, applying primary coat with **one** coat of Zinc rich epoxy primer to a thickness of 40 microns ,followed by finishing coats **2 coats** with Solventless Coal tar epoxy with material, labour and all accessories **with all leads and lifts**

DATA: Consider 100 sqm area for painting:
Requirement of materials :

Theoretical spreading rate per one Coat of Paint 25 Sqm/Hr
Assume Losses at 30% of the spreading area (as per field obserations)

Actual Spreading Area 17.50 Sqm/Hr
Total time required for 100 Sqm Area 5.71 Hr
Say 6.00 Hr

DATA: **RATE ANALYSIS** UNIT : **100.000** Sq.m

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rust cleaner / inhibitor	ltr	13.00000	150.00	1950.00
2	Zinc rich epoxy primer	ltr	14.00000	675.00	9450.00
3	Thinner@10%	ltr	1.40000	113.00	158.20
4	Solvetnless Coal tar epoxy paint	ltr	40.00000	310.00	12400.00
5	Thinner@10%	ltr	4.00000	113.00	452.00
6	Wire brush	Nos	2.00000	49.00	98.00
7	Sundries	LS	3.00000	41.00	123.00
Total cost of Materials				Rs:	24631.20

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Hire Charges of Airless Spray Gun	Hr	6.00000	123.07	738.42
2	Hire Charges of Air Compressor-7 Cmm (diesel)	Hr	6.00000	237.70	1426.20
3	Fuel Charges of Air Compressor	Hr	6.00000	1205.58	7233.48
Total cost of Machinery				Rs:	9398.10

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew Charges of Air Compressor	Day	6.00000	333.22	1999.32
2	Painter Class-I	Day	13.00000	795.00	10335.00
3	Helper	Day	13.00000	595.00	7735.00
Total cost of Labour				Rs:	20069.32

labour component/unit qty 200.70

Add contractor's profit and overhead charges 13.615% 27.30

labour component/unit qty (including contractor's profit) **228.00**

ABSTRACT:

A. Cost of Materials		Rs:	24631.20
B. Hire charges of Machinery		Rs:	9398.10
C. Cost of Labour		Rs:	20069.32
	Total	Rs:	54098.62
D. Add for excise duty	0.00%	Rs:	0.00
(on 75 percent cost excluding cost of materials)	Total	Rs:	54098.62
E. Add for transportation upto work site @	3%	Rs:	1622.96
	Total	Rs:	55721.58
F. Add for contractor's profit and overheads on			
(A+B+C+D+E)	13.615%	Rs:	7586.49
Total cost for	100.00 sqm	Rs:	63308.07
	Rate per sq.meter	Rs:	633.08

CHAPTER-VI

PRELIMINARY AND MAINTENANCE WORKS - Standard Data

(STORED WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)

For the Year : 2024-25

Index- code
IRR-PMW

PRELIMINARY & MAINTENANCE WORKS - DATA RATES

Directions to add Seigniorage Charges and Additional Lead Charges

Seigniorage Charges:

1. The unit rate for work item in the Standard Data is **exclusive of Seigniorage Charges** wherever applicable.
2. The appropriate Seigniorage Charges for relevant materials are to be added in the Part-B of the estimate

Additional Lead and Lift Charges:

1. Unless otherwise specified the basic rates are inclusive of all lifts.
2. For concrete, masonry and reinforcement items **wherever** initial lead of 1km is considered in the basic rate, the additional lead as follows:
Additional lead charges for Steel, sand, coarse aggregate, stones and stone chips shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.
In case of Cement and Steel, Loading and unloading charges are already added in the work item while arriving the unit rate and hence should not be added again
Example:

Total lead for sand from approved sand quarry :	15 Km
Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) :	1 Km
Additional lead charges :	
Lead charges for 5 km	Rs. 115.13
Lead charges for next 10 km	Rs. 172.695
Total lead charges for 15 km /cum	Rs. 287.82
Less 1 km initial lead charges /cum	Rs. 43.17 (-)
Net additional lead charges / cum	Rs. 244.65

3. The Leads for Steel shall be from the nearest market place to the Project area

4. For earth/rockfill embankments **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:
Additional lead charges for Earth, Murrum etc., shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item. (same as above)
Example:

Total lead for earth from approved borrow area :	15 Km
Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) :	1 Km
Additional lead charges :	
Lead charges for 5 km	Rs. 115.13
Lead charges for next 10 km	Rs. 172.695
Total lead charges for 15 km /cum	Rs. 287.82
Less 1 km initial lead charges /cum	Rs. 43.17 (-)
Net additional lead charges / cum	Rs. 244.65

5. The initial lead up to 50 m as mentioned in some standard data items is meant for manual lead within the working area. For conveyance of materials, the lead required from quarry/Borrow area/ Dump Area to worksite shall be added to the data without deducting the 50 m initial lead charges

PMW - Work Items

IRR-PMW-1 JUNGLE CLEARANCE :

IRR-PMW-1-1 **Clearing thin jungle growth (more than 50 percent open space) including bushes upto 30 cm / parthenium and other weeds** including burning or disposing off the same as directed etc., complete.

DATA:

RATE ANALYSIS

UNIT : 1000 sqm

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.50000	775.00	387.50
2	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	2172.50

labour component/unit qty 2.20
Add contractor's profit and overhead charges 13.615% 0.30
labour component/unit qty (including contractor's profit) 2.50

ABSTRACT:

A. Cost of Materials		Rs:	0.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	2172.50
	Total	Rs:	2172.50
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	295.79
Total cost for	1000.00 sqm	Rs:	2468.29
Rate per sqm	(A+B+C+D)/1000.0	Rs.	2.47

IRR-PMW-1-2 **Clearing thick jungle growth (less than 50 percent open space) including bushes upto 30 cm / parthenium and other weeds** including burning or disposing off the same as directed etc., complete.

DATA:

RATE ANALYSISUNIT : **1000 sqm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.50000	775.00	387.50
2	mazdoor	Day	5.00000	595.00	2975.00
Total cost of Labour				Rs:	3362.50

labour component/unit qty	3.40
Add contractor's profit and overhead charges	13.615% 0.50
labour component/unit qty (including contractor's profit)	3.90

ABSTRACT:

A. Cost of Materials		Rs:	0.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	3362.50
	Total	Rs:	3362.50
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	457.8
Total cost for	1000.00 sqm	Rs:	3820.30
Rate per sqm	(A+B+C+D)/1000.0	Rs.	3.82

IRR-PMW-1-3 **Removing stumps, tree roots, roots of bamboo clusters etc., upto 1.50 m girth** including excavation, stacking the materials neatly and levelling the surface etc., complete with **initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **18 Nos.****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.25000	775.00	193.75
2	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	1383.75

labour component/unit qty	76.90
Add contractor's profit and overhead charges	13.615% 10.50
labour component/unit qty (including contractor's profit)	87.40

ABSTRACT:

A. Cost of Materials		Rs:	0.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	1383.75
	Total	Rs:	1383.75

D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	188.4
Total cost for	18.00 Nos. Rs:	1572.15
Rate per each	(A+B+C+D)/18.0	Rs. 87.34

IRR-PMW-1-4 **Removing stumps, tree roots, roots of bamboo cluster etc., with girth above 1.50 m and upto 3.0 m** including excavation, stacking the materials neatly and levelling the area etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **8 Nos.****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.25000	775.00	193.75
2	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	1383.75

labour component/unit qty 172.97
 Add contractor's profit and overhead charges 13.615% 23.55
 labour component/unit qty (including contractor's profit) **196.50**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	1383.75
Total	Rs:	1383.75

D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	188.4
Total cost for	8.00 Nos. Rs:	1572.15
Rate per each	(A+B+C+D)/8.0	Rs. 196.52

IRR-PMW-1-5 **Removing stumps, tree roots, roots of bamboo cluster etc., with girth above 3.0 m and upto 5.0 m** including excavation, stacking the materials neatly and levelling the area etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **5 Nos.****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.50000	775.00	387.50
2	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	2767.50

labour component/unit qty 553.50
 Add contractor's profit and overhead charges 13.615% 75.40
 labour component/unit qty (including contractor's profit) **628.90**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	2767.50
Total	Rs:	2767.50

D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	376.8
Total cost for	5.00 Nos. Rs:	3144.30
Rate per each	(A+B+C+D)/5.0	Rs. 628.86

IRR-PMW-1-6 **Additional rate for every 0.5 m increase in girth** of tree stump / stumps of bamboo cluster beyond 5 m.

DATA:

RATE ANALYSIS

UNIT :

7 Nos.**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.22000	775.00	170.50
2	mazdoor	Day	0.87500	595.00	520.63
Total cost of Labour				Rs:	691.13

labour component/unit qty 98.70
 Add contractor's profit and overhead charges 13.615% 13.40
 labour component/unit qty (including contractor's profit) **112.10**

ABSTRACT:

A. Cost of Materials Rs: 0.00
 B. Hire charges of Machinery Rs: 0.00
 C. Cost of Labour Rs: 691.13
 Total Rs: 691.13

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 94.1
 Total cost for 7.00 Nos. Rs: **785.23**
Rate per each (A+B+C+D)/7.0 Rs: **112.18**

IRR-PMW-1-7

Cutting and stacking bamboos excluding removing stumps and roots etc., complete with **initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

150 Nos.**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.50000	775.00	387.50
2	mazdoor	Day	5.00000	595.00	2975.00
Total cost of Labour				Rs:	3362.50

labour component/unit qty 22.42
 Add contractor's profit and overhead charges 13.615% 3.05
 labour component/unit qty (including contractor's profit) **25.50**

ABSTRACT:

A. Cost of Materials Rs: 0.00
 B. Hire charges of Machinery Rs: 0.00
 C. Cost of Labour Rs: 3362.50
 Total Rs: 3362.50

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 457.8
 Total cost for 150.00 Nos. Rs: **3820.30**
Rate per each (A+B+C+D)/150.0 Rs: **25.47**

IRR-PMW-1-8

Cutting and removing jauliflora bushes upto 1.5 m girth excluding removal of stumps and including burning or disposing off the materials as directed **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

100 Nos.**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.50000	775.00	387.50
2	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	2172.50

labour component/unit qty 21.70
 Add contractor's profit and overhead charges 13.615% 3.00
 labour component/unit qty (including contractor's profit) **24.70**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	2172.50
Total	Rs:	2172.50

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 295.79
 Total cost for 100.00 Nos Rs: **2468.29**
Rate per each (A+B+C+D)/100.0 Rs. **24.68**

IRR-PMW-1-9 **Cutting and removing jauliflora bushes above 1.5 m upto 3.0 m girth** excluding removal of stumps and including burning or disposing off the materials as directed **with initial lead upto 50 m and all lifts.**

DATA: **RATE ANALYSIS** UNIT : **50 Nos**

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.50000	775.00	387.50
2	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	2172.50

labour component/unit qty 43.50
 Add contractor's profit and overhead charges 13.615% 5.90
 labour component/unit qty (including contractor's profit) **49.40**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	2172.50
Total	Rs:	2172.50

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 295.79
 Total cost for 50.00 Nos Rs: **2468.29**
Rate per each (A+B+C+D)/50.0 Rs. **49.37**

IRR-PMW-1-10 **Cutting trees above 0.3 m and upto 0.6 m girth** excluding removal of stumps and including stacking the materials neatly as directed **with initial lead upto 50 m and all lifts.**

DATA: **RATE ANALYSIS** UNIT : **14 Nos.**

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of ropes etc	LS	0.25000	198.00	49.50
			0.00000	0.00	0.00
Total cost of Materials				Rs:	49.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.25000	775.00	193.75
2	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	1978.75

labour component/unit qty 141.30
 Add contractor's profit and overhead charges 13.615% 19.20
 labour component/unit qty (including contractor's profit) **160.50**

ABSTRACT:

A. Cost of Materials	Rs:	49.50
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	1978.75
Total	Rs:	2028.25
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	276.15
Total cost for 14.00 Nos.	Rs:	2304.40
Rate per each (A+B+C+D)/14.0	Rs:	164.60

IRR-PMW-1-11 **Cutting trees above 0.6 m and upto 1.2 m girth** excluding removal of stumps and including stacking the materials neatly as directed **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT : 4 Nos.

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of ropes etc	LS	0.25000	198.00	49.50
			0.00000	0.00	0.00
Total cost of Materials				Rs:	49.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.25000	775.00	193.75
2	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	1978.75

labour component/unit qty 494.70
 Add contractor's profit and overhead charges 13.615% 67.40
 labour component/unit qty (including contractor's profit) **562.10**

ABSTRACT:

A. Cost of Materials	Rs:	49.50
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	1978.75
Total	Rs:	2028.25
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	276.15
Total cost for 4.00 Nos.	Rs:	2304.40
Rate per each (A+B+C+D)/4.0	Rs:	576.10

IRR-PMW-1-12 **Cutting trees above 1.2 m and upto 1.8 m girth** excluding removal of stumps and including stacking the materials neatly as directed **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT : 2 Nos.

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of ropes etc	LS	0.25000	198.00	49.50
			0.00000	0.00	0.00
Total cost of Materials				Rs:	49.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.25000	775.00	193.75
2	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	1978.75

labour component/unit qty 989.40
 Add contractor's profit and overhead charges 13.615% 134.70
 labour component/unit qty (including contractor's profit) **1124.10**

ABSTRACT:

A. Cost of Materials		Rs:	49.50
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	1978.75
	Total	Rs:	2028.25
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	276.15
Total cost for	2.00 Nos.	Rs:	2304.40
Rate per each	(A+B+C+D)/2.0	Rs.	1152.20

IRR-PMW-1-13 **Cutting trees above 1.8 m and upto 2.4 m girth** excluding removal of stumps and including stacking the materials neatly as directed **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT : 1 No.

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of ropes etc	LS	0.25000	198.00	49.50
			0.00000	0.00	0.00
Total cost of Materials				Rs:	49.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.25000	775.00	193.75
2	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	1978.75

labour component/unit qty 1978.80
 Add contractor's profit and overhead charges 13.615% 269.40
 labour component/unit qty (including contractor's profit) **2248.20**

ABSTRACT:

A. Cost of Materials		Rs:	49.50
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	1978.75
	Total	Rs:	2028.25
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	276.15
Total cost for	1.00 No.	Rs:	2304.40
Rate per each	(A+B+C+D)/1.0	Rs.	2304.40

IRR-PMW-1-14 **Cutting trees above 2.4 m and upto 3.0 m girth** excluding removal of stumps and including stacking the materials neatly as directed **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT : 1 Nos.

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of ropes etc	LS	0.50000	198.00	99.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	99.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.25000	775.00	193.75
2	mazdoor	Day	5.00000	595.00	2975.00
Total cost of Labour				Rs:	3168.75

labour component/unit qty 3168.80
 Add contractor's profit and overhead charges 13.615% 431.40
 labour component/unit qty (including contractor's profit) **3600.20**

ABSTRACT:

A. Cost of Materials		Rs:	99.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	3168.75
	Total	Rs:	3267.75
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	444.9
Total cost for	1.00 Nos.	Rs:	3712.65
Rate per each	(A+B+C+D)/1.0	Rs.	3712.65

IRR-PMW-1-15 **Additional rate for cutting tree for every 0.5 m increase in girth of tree beyond 3 m.**

DATA:

RATE ANALYSIS

UNIT :

1 No**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of ropes etc	LS	0.15000	198.00	29.70
			0.00000	0.00	0.00
Total cost of Materials				Rs:	29.70

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.10000	775.00	77.50
2	mazdoor	Day	1.75000	595.00	1041.25
Total cost of Labour				Rs:	1118.75

labour component/unit qty 1118.80
 Add contractor's profit and overhead charges 13.615% 152.30
 labour component/unit qty (including contractor's profit) **1271.10**

ABSTRACT:

A. Cost of Materials Rs: 29.70
 B. Hire charges of Machinery Rs: 0.00
 C. Cost of Labour Rs: 1118.75
 Total Rs: 1148.45
 D. Add for contractor's profit and overheads
 on (A+B+C) 13.615% Rs: 156.36
 Total cost for 1.00 No Rs: **1304.81**
Rate per each (A+B+C+D)/1.0 Rs. **1304.81**

IRR-PMW-1-26 **Cutting and burning or disposing off Apu / Jondu from marshy areas as directed with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

1000 sqm**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	12.00000	595.00	7140.00
Total cost of Labour				Rs:	7915.00

labour component/unit qty 7.90
 Add contractor's profit and overhead charges 13.615% 1.10
 labour component/unit qty (including contractor's profit) **9.00**

ABSTRACT:

A. Cost of Materials Rs: 0.00
 B. Hire charges of Machinery Rs: 0.00
 C. Cost of Labour Rs: 7915.00
 Total Rs: 7915.00
 D. Add for contractor's profit and overheads
 on (A+B+C) 13.615% Rs: 1077.63
 Total cost for 1000.00 sqm Rs: **8992.63**
Rate per sqm (A+B+C+D)/1000.0 Rs. **8.99**

IRR-PMW-2 **PRELIMINARY WORKS :**IRR-PMW-2-1 **Earthwork excavation for trial pits / borrow pits and other investigation works in all kinds of soil including boulders upto 30 cm dia and disposing off excavated soil as directed with lead upto 10 m and lift upto 3 m.**

DATA:

RATE ANALYSIS

UNIT :

10 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.50000	775.00	387.50
2	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	3957.50

labour component/unit qty 395.75
 Add contractor's profit and overhead charges 13.615% 53.88
 labour component/unit qty (including contractor's profit) **449.60**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	3957.50
Total	Rs:	3957.50
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	538.81
Total cost for 10.00 cum	Rs:	4496.31
Rate per cum	(A+B+C+D)/10.0	Rs. 449.63

IRR-PMW-2-2 **Earthwork excavation for trial pits / borrow pits and other investigation works in soft rock including disposing off the excavated rock as directed with lead upto 10 m and lift upto 3 m.**

DATA:

RATE ANALYSIS

UNIT :

10 cum**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.50000	775.00	387.50
2	Crowbarman	Day	1.00000	640.00	640.00
3	mazdoor	Day	7.50000	595.00	4462.50
Total cost of Labour				Rs:	5490.00

labour component/unit qty 549.00
 Add contractor's profit and overhead charges 13.615% 74.70
 labour component/unit qty (including contractor's profit) **623.70**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	5490.00
Total	Rs:	5490.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	747.46
Total cost for 10.00 cum	Rs:	6237.46
Rate per cum	(A+B+C+D)/10.0	Rs. 623.75

IRR-PMW-2-3 **Conducting geophysical investigation studies by electrical resistivity method in stages of 5m for sub-surface details such as depth of formations, shear zones, classification of strata, depth of water table etc., including cost of all materials, equipments, labour, analysing and reporting the details of field studies conducted etc., complete excluding cost of transportation arrangements.**

DATA:

RATE ANALYSIS

UNIT :

20 Stages**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Sundries (misc. consumables)		5.00000	41.00	205.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	205.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Electric resistivity meter	Hour	8.00000	108.70	869.60
	Battery / charging cost etc @	20%			173.92
Total hire charges of Machinery				Rs:	1043.52

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Geophysist / Geologist	Day	2.00000	1420.00	2840.00
2	Graduate Engineer	Day	1.00000	1420.00	1420.00
3	Lab Assistant	Day	1.00000	815.00	815.00
4	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	7455.00

labour component/unit qty 372.80
 Add contractor's profit and overhead charges 13.615% 50.80
 labour component/unit qty (including contractor's profit) **423.60**

ABSTRACT:

A. Cost of Materials	Rs:	205.00
B. Hire charges of Machinery	Rs:	1043.52
C. Cost of Labour	Rs:	7455.00
Total	Rs:	8703.52
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1184.98
Total cost for 20.00 Stages	Rs:	9888.50
Rate per stage	(A+B+C+D)/20.0 Rs.	494.43

IRR-PMW-2-4

Drilling 80 mm dia hole through over-burden using casing shoe bit vertical or inclined upto 10 degrees to vertical as directed including cost of all materials, machinery, labour, water charges, reaming, collection of wash samples at suitable intervals, logging and labelling, supplying honne wood core box, fixing casing pipes (excluding cost of casing pipes) etc., **complete for depth upto 30 m from surface.**

Data:

RATE ANALYSISUNIT : **3.00 Rm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of casing shoe bit	Rm	3.00000	142.22	426.66
2	Use rate of reamer shell	Rm	3.00000	34.87	104.61
3	Use rate of extension rod set 16.5 m	Rm	3.00000	1.96	5.88
4	Use rate of honne core box	Rm	3.00000	228.97	686.91
Total cost of Materials				Rs:	1224.06

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Core drilling machine	Hour	1.00000	318.25	318.25
	Fuel / Energy charges	Hour	1.00000	401.86	401.86
2	5 hp pump (diesel) 2 Nos.	Hour	2.00000	10.34	20.68
	Fuel / Energy charges	Hour	2.00000	133.95	267.90
3	Sundries (samplers etc)	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	1090.69

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Core drilling machine	Hour	1.00000	443.04	443.04
2	Crew for Pump	Hour	2.00000	173.47	346.94
3	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	1979.98

labour component/unit qty 660.00
 Add contractor's profit and overhead charges 13.615% 89.90
 labour component/unit qty (including contractor's profit) **749.90**

ABSTRACT:

A. Cost of Materials	Rs:	1224.06
B. Hire charges of Machinery	Rs:	1090.69
C. Cost of Labour	Rs:	1979.98
Total	Rs:	4294.73
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	584.73
Total cost for 3.00 Rm	Rs:	4879.46
Rate per Rm	(A+B+C+D)/3.0 Rs.	1626.49

IRR-PMW-2-5

Drilling 76 mm dia (NX) core hole in hard rock using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging and labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., **complete for depth upto 30 m from surface.**

Data:

RATE ANALYSIS

UNIT :

3.00 Rm**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of diamond core bit	Rm	3.00000	1044.67	3134.01
2	Use rate of reamer shell	Rm	3.00000	104.62	313.86
3	Use rate of double tube core barrel	Rm	3.00000	278.38	835.14
4	Use rate of extension rod set 16.5 m	Rm	3.00000	26.08	78.24
5	Use rate of honne core box	Rm	3.00000	515.18	1545.54
Total cost of Materials				Rs:	5906.79

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Core drilling machine	Hour	8.00000	318.25	2546.00
	Fuel / Energy charges	Hour	8.00000	401.86	3214.88
2	5 hp pump (diesel) 2 Nos.	Hour	16.00000	10.34	165.44
	Fuel / Energy charges	Hour	16.00000	133.95	2143.20
3	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	8274.52

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Core drilling machine	Hour	8.00000	443.04	3544.32
2	Crew for Pump	Hour	16.00000	173.47	2775.52
3	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	7509.84

labour component/unit qty 2503.30
 Add contractor's profit and overhead charges 13.615% 340.80
 labour component/unit qty (including contractor's profit) **2844.10**

ABSTRACT:

A. Cost of Materials	Rs:	5906.79
B. Hire charges of Machinery	Rs:	8274.52
C. Cost of Labour	Rs:	7509.84
Total	Rs:	21691.15
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	2953.25
Total cost for	3.00 Rm Rs:	24644.40
Rate per Rm	(A+B+C+D)/3.0 Rs.	8214.80

NOTE: 1. For drilling in hard rock beyond 30 m upto 60 m from surface increase the basic rate per Rm by 25 percent.
 2. For drilling in hard rock beyond 60 m upto 90 m from surface increase the basic rate per Rm by 40 percent.

IRR-PMW-2-5-A
 New Item 2015-16-5

Drilling 76 mm dia (NX) core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface for Primary and Secondary Holes

Data:

RATE ANALYSIS

UNIT :

3.00 Rm**A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of diamond core bit	Rm	3.00000	1482.50	4447.50
2	Use rate of reamer shell	Rm	3.00000	62.77	188.31
4	Use rate of extension rod set 16.5 m	Rm	3.00000	15.65	46.95
Total cost of Materials				Rs:	4682.76

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Core drilling machine	Hour	4.77600	318.25	1519.96
	Fuel / Energy charges	Hour	4.77600	401.86	1919.28
2	5 hp pump (diesel) 2 Nos.	Hour	9.55200	10.34	98.77
	Fuel / Energy charges	Hour	9.55200	133.95	1279.49
3	Sundries	LS	2.99000	41.00	122.59
Total hire charges of Machinery				Rs:	4940.09

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Core drilling machine	Hour	4.77600	443.04	2115.96
2	Crew for Pump	Hour	9.55000	173.47	1656.64
3	mazdoor	Day	1.19000	595.00	708.05
Total cost of Labour				Rs:	4480.65

labour component/unit qty 1493.60
 Add contractor's profit and overhead charges 13.615% 203.40
 labour component/unit qty (including contractor's profit) **1697.00**

ABSTRACT:

A. Cost of Materials	Rs:	4682.76
B. Hire charges of Machinery	Rs:	4940.09
C. Cost of Labour	Rs:	4480.65
Total	Rs:	14103.50
D. Add for contractor's profit and overheads	13.615% Rs:	1920.19
Total cost for	3.00 Rm Rs:	16023.69
Rate per Rm	(A+B+C+D)/3.0 Rs.	5341.23

- NOTE: 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the basic rate per Rm by 25 percent.
 2. For drilling in all types of rocks (other than hard rock) including masonry/CC m from surface increase the basic beyond 60 m upto 90 rate per Rm by 40 percent.

IRR-PMW-2-5-B
 New Item 2015-16-
 6

Drilling 76 mm dia (NX) core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging and labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface for Test Holes

Data:

RATE ANALYSIS

UNIT :

3.00 Rm

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of diamond core bit	Rm	3.00000	1482.50	4447.50
2	Use rate of reamer shell	Rm	3.00000	62.77	188.31
3	Use rate of double tube core barrel	Rm	3.00000	167.03	501.09
4	Use rate of extension rod set 16.5 m	Rm	3.00000	15.65	46.95
5	Use rate of honne core box	Rm	3.00000	515.18	1545.54
Total cost of Materials				Rs:	6729.39

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Core drilling machine	Hour	4.77600	318.25	1519.96
	Fuel / Energy charges	Hour	4.77600	401.86	1919.28
2	5 hp pump (diesel) 2 Nos.	Hour	9.55200	10.34	98.77
	Fuel / Energy charges	Hour	9.55200	133.95	1279.49
3	Sundries	LS	2.99000	41.00	122.59
Total hire charges of Machinery				Rs:	4940.09

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Core drilling machine	Hour	4.77600	443.04	2115.96
2	Crew for Pump	Hour	9.55200	173.47	1656.99
3	mazdoor	Day	1.19400	595.00	710.43
Total cost of Labour				Rs:	4483.38

labour component/unit qty 1494.50
 Add contractor's profit and overhead charges 13.615% 203.50
 labour component/unit qty (including contractor's profit) **1698.00**

ABSTRACT:

A. Cost of Materials	Rs:	6729.39
B. Hire charges of Machinery	Rs:	4940.09
C. Cost of Labour	Rs:	4483.38
	Rs:	16152.86
D. Add for contractor's profit and overheads	13.615% Rs:	2199.21
Total cost for	3.00 Rm Rs:	18352.07
Rate per Rm	(A+B+C+D)/3.0 Rs.	6117.36

- NOTE: 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the basic rate per Rm by 25 percent.
 2. For drilling in all types of rocks (other than hard rock) including masonry/CC m from surface increase the basic beyond 60 m upto 90 rate per Rm by 40 percent.

IRR-PMW-2-6

Drilling 47 mm (BX)dia core hole in hard rock using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging, labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface.

Data:

RATE ANALYSIS

UNIT :

3.00 Rm

A. MATERIALS:

SI No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of diamond core bit	Rm	3.00000	870.00	2610.00
2	Use rate of reamer shell	Rm	3.00000	104.62	313.86
3	Use rate of double tube core barrel	Rm	3.00000	278.38	835.14
4	Use rate of extension rod set 16.5 m	Rm	3.00000	26.08	78.24
5	Use rate of honne core box	Rm	3.00000	515.18	1545.54
Total cost of Materials				Rs:	5382.78

B. MACHINERY:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Core drilling machine	Hour	8.00000	318.25	2546.00
	Fuel / Energy charges	Hour	8.00000	401.86	3214.88
2	5 hp pump (diesel) 2 Nos.	Hour	16.00000	10.34	165.44
	Fuel / Energy charges	Hour	16.00000	133.95	2143.20
3	Sundries	LS	5.00000	41.00	205.00
Total hire charges of Machinery				Rs:	8274.52

C. LABOUR:

SI No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Core drilling machine	Hour	8.00000	443.04	3544.32
2	Crew for Pump	Hour	16.00000	173.47	2775.52
3	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	7509.84

labour component/unit qty	2503.30
Add contractor's profit and overhead charges	13.615% 340.80
labour component/unit qty (including contractor's profit)	2844.10

ABSTRACT:

A. Cost of Materials		Rs:	5382.78
B. Hire charges of Machinery		Rs:	8274.52
C. Cost of Labour		Rs:	7509.84
	Total	Rs:	21167.14
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	2881.91
Total cost for	3.00 Rm	Rs:	24049.05
Rate per Rm	(A+B+C+D)/3.0	Rs.	8016.35

- NOTE: 1. For drilling in hard rock beyond 30 m upto 60 m from surface increase the basic rate for drilling upto 30 m from surface by 25 percent per Rm.
2. For drilling in hard rock beyond 60 m upto 90 m from surface increase the basic rate for drilling upto 30 m from surface by 40 percent per Rm.

IRR-PMW-2-6-A
New Item 2015-16-7

Drilling 47 mm (BX) dia core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, and redrilling in case of collapse of sides etc., complete for depth upto 30 m

Data:

RATE ANALYSISUNIT : **3.00 Rm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Use rate of diamond core bit	Rm	3.00000	1234.63	3703.89
2	Use rate of reamer shell	Rm	3.00000	62.77	188.31
4	Use rate of extension rod set 16.5 m	Rm	3.00000	15.65	46.95
Total cost of Materials				Rs:	3939.15

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Core drilling machine	Hour	4.77600	318.25	1519.96
	Fuel / Energy charges	Hour	4.77600	401.86	1919.28
2	5 hp pump (diesel) 2 Nos.	Hour	9.55200	10.34	98.77
	Fuel / Energy charges	Hour	9.55200	133.95	1279.49
3	Sundries	LS	2.99000	41.00	122.59
Total hire charges of Machinery				Rs:	4940.09

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Core drilling machine	Hour	4.77600	443.04	2115.96
2	Crew for Pump	Hour	9.55000	173.47	1656.64
3	mazdoor	Day	1.19000	595.00	708.05
Total cost of Labour				Rs:	4480.65

labour component/unit qty	1493.60
Add contractor's profit and overhead charges	13.615% 203.40
labour component/unit qty (including contractor's profit)	1697.00

ABSTRACT:

A. Cost of Materials		Rs:	3939.15
B. Hire charges of Machinery		Rs:	4940.09
C. Cost of Labour		Rs:	4480.65
	Total	Rs:	13359.89
D. Add for contractor's profit and overheads	13.615%	Rs:	1818.95
Total cost for	3.00 Rm	Rs:	15178.84
Rate per Rm	(A+B+C+D)/3.0	Rs.	5059.61

- NOTE: 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the basic rate per Rm by 25 percent.
2. For drilling in all types of rocks (other than hard rock) including masonry/CC m from surface increase the basic beyond 60 m upto 90 rate per Rm by 40 percent.

IRR-PMW-2-7

Providing and fixing 20 x 20 x 75 cm size roughly dressed boundary / demarcation / chainage / arrow stones including cost of all materials, labour, engraving marks, fixing in position, murum filling etc., complete with lead upto 50 m and all lifts.

Data:

RATE ANALYSISUNIT : **18 Nos.****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rough stone 20x20x75 cm	Each	18.00000	31.00	558.00
2	Murum	cum	1.00000	250.00	250.00
Total cost of Materials				Rs:	808.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Stone chiseller Cl- I	Day	1.00000	700.00	700.00
3	mazdoor	Day	3.00000	595.00	1785.00
Total cost of Labour				Rs:	3260.00

labour component/unit qty 181.10
 Add contractor's profit and overhead charges 13.615% 24.70
 labour component/unit qty (including contractor's profit) **205.80**

ABSTRACT:

A. Cost of Materials		Rs:	808.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	3260.00
Total		Rs:	4068.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	553.86
Total cost for	18.00 Nos.	Rs:	4621.86
Rate per each	(A+B+C+D)/18.0	Rs.	256.77

IRR-PMW-2-8 Providing and **fixing 20 x 20 x 75 cm size temporary bench mark stone in CC 1 : 4 : 8** using **40 mm down size** graded coarse aggregate including cost of all materials, labour, dressing top surface, engraving BM data etc., complete **with lead upto 50 m and all lifts.**

Data:

RATE ANALYSIS

UNIT : 10 Nos.

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rough stone 20x20x75 cm	Each	10.00000	31.00	310.00
2	Cement for CC & top finishing	kg	91.00000	4.22	384.02
3	Coarse aggregate 40-20 mm	cum	0.25000	1441.00	360.25
	Coarse aggregate 20-10 mm	cum	0.15000	1508.00	226.20
	Coarse aggregate 10-4.75 mm	cum	0.10000	1098.00	109.80
4	Sand (Un-Screened)	cum	0.25000	605.00	151.25
Total cost of Materials				Rs:	1541.52

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Stone chiseller Cl- I	Day	3.00000	700.00	2100.00
3	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	5255.00

labour component/unit qty 525.50
 Add contractor's profit and overhead charges 13.615% 71.50
 labour component/unit qty (including contractor's profit) **597.00**

ABSTRACT:

A. Cost of Materials		Rs:	1541.52
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	5255.00
	Total	Rs:	<u>6796.52</u>
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	925.35
Total cost for	10.00 Nos.	Rs:	7721.87
Rate per each	(A+B+C+D)/10.0	Rs.	772.19
NOTE: For providing 30 cm thick compacted murum bed in B.C soil area including additional excavation for thickness of murum bedding add per Each			
		Rs:	4.00

IRR-PMW-2-9 Providing and **fixing 20 x 20 x 75 cm size permanent bench mark stone in CC 1 : 3 : 6** block of size 90 x 90 x 120 cm using **40 mm down size** graded coarse aggregate and providing 35 cm thick 30 cm high UCR masonry in CM 1 : 5 proportion protective wall around the BM stone, including cost of all materials, labour, dressing top surface of stone, engraving BM data on top surface, excavation, finishing, curing etc., complete **with lead upto 50 m and all lifts.**

Data:

RATE ANALYSIS

UNIT : 1 No.

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rough stone 20x20x75 cm	Each	1.00000	31.00	31.00
2	Cement	kg	262.00000	4.22	1105.64
3	Coarse aggregate 40-20 mm	cum	0.50000	1441.00	720.50
	Coarse aggregate 20-10 mm	cum	0.30000	1508.00	452.40
	Coarse aggregate 10-4.75 mm	cum	0.20000	1098.00	219.60
4	Rubble stone at quarry	cum	0.25000	395.00	98.75
5	Stone chips at quarry	cum	0.04000	466.00	18.64
6	Sand (Un-Screened)	cum	0.60000	605.00	363.00
Total cost of Materials				Rs:	3009.53

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Stone chiseller Cl- I	Day	0.50000	700.00	350.00
3	Mason Cl- II	Day	1.00000	640.00	640.00
4	mazdoor	Day	5.00000	595.00	2975.00
Total cost of Labour				Rs:	4740.00

labour component/unit qty 4740.00
 Add contractor's profit and overhead charges 13.615% 645.40
 labour component/unit qty (including contractor's profit) **5385.40**

ABSTRACT:

A. Cost of Materials	Rs:	3009.53
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	4740.00
Total	Rs:	7749.53
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1055.1
Total cost for	1.00 No. Rs:	8804.63
Rate per each	(A+B+C+D)/1.0 Rs.	8804.63

IRR-PMW-3

MAINTENANCE WORKS :

IRR-PMW-3-1

Removing dry stone rock-toe / rivetment and filter layers below rock-toe/ rivetment
 including stacking all materials separately as directed with initial lead upto 50 m and all lifts.

Data:

RATE ANALYSISUNIT : **105 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Cl- II	Day	6.00000	640.00	3840.00
3	mazdoor	Day	48.00000	595.00	28560.00
Total cost of Labour				Rs:	33175.00

labour component/unit qty 316.00
 Add contractor's profit and overhead charges 13.615% 43.00
 labour component/unit qty (including contractor's profit) **359.00**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	33175.00
Total	Rs:	33175.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	4516.78
Total cost for	105.00 cum Rs:	37691.78
Rate per cum	(A+B+C+D)/105.0 Rs.	358.97

IRR-PMW-3-2

Re-constructing 60 cm thick hand packed rough stone revetment with through
 stones at 1.5 m c / c over a backing of 45 cm thick graded filter media consisting of sand,
 10 mm and 40 mm size graded aggregates satisfying filter criteria laid in layers of 15 cm thick
 each using sand from approved quarry and stones and filter aggregates obtained from
 revetment removed for re-construction including cost of all machinery, labour, laying filter and
 stones to specified slopes, wedging with chips, finishing etc. complete with initial
 lead upto 50 m and all lifts.

Data:

RATE ANALYSISUNIT : **100 sqm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Sand (Un-Screened) (from quarry)	cum	15.30000	605.00	9256.50
2	Coarse aggregate 10 mm (available)	cum	15.30000	0.00	0.00
3	Coarse aggr. 40-20 mm (available)	cum	15.30000	0.00	0.00
4	Stone chips (available)	cum	9.00000	0.00	0.00
5	Rough stones (available)	cum	57.60000	0.00	0.00
6	Through stones (available)	Nos	44.00000	0.00	0.00
Total cost of Materials				Rs:	9256.50

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Cl- II	Day	5.00000	640.00	3200.00
3	mazdoor	Day	33.00000	595.00	19635.00
Total cost of Labour				Rs:	23610.00

labour component/unit qty 236.10
 Add contractor's profit and overhead charges 13.615% 32.10
 labour component/unit qty (including contractor's profit) **268.20**

ABSTRACT:

A. Cost of Materials	Rs:	9256.50
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	23610.00
Total	Rs:	<u>32866.50</u>

D. Add for contractor's profit and overheads
 on (A+B+C) 13.615% Rs: 4474.77
 Total cost for 100.00 sqm Rs: **37341.27**
Rate per sqm (A+B+C+D)/100.0 Rs. **373.41**

IRR-PMW-3-3 **Re-constructing dry rubble rock-toe and filter media for rock-toe** consisting of sand 20 mm and 80 mm size graded aggregates satisfying filter criteria laid in layers of 15 cm thick each using sand from approved quarry and stones and filter aggregates obtained from rock-toe removed for re-construction including cost of all machinery, labour, laying filter and stones to specified slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts.

Data:

RATE ANALYSISUNIT : **100 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rubble (available)	cum	58.20000	0.00	0.00
2	Stone chips (available)	cum	8.70000	0.00	0.00
3	80-20 mm filter (available)	cum	19.40000	0.00	0.00
4	20 mm down filter (available)	cum	12.10000	0.00	0.00
5	Sand (Un-Screened) (fresh from quarry)	cum	9.80000	605.00	5929.00
Total cost of Materials				Rs:	5929.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Cl- II	Day	7.00000	640.00	4480.00
3	mazdoor	Day	48.00000	595.00	28560.00
Total cost of Labour				Rs:	33815.00

labour component/unit qty 338.20
 Add contractor's profit and overhead charges 13.615% 46.00
 labour component/unit qty (including contractor's profit) **384.20**

ABSTRACT:

A. Cost of Materials	Rs:	5929.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	33815.00
Total	Rs:	<u>39744.00</u>

D. Add for contractor's profit and overheads
 on (A+B+C) 13.615% Rs: 5411.15
 Total cost for 100.00 cum Rs: **45155.15**
Rate per cum (A+B+C+D)/100.0 Rs. **451.55**

IRR-PMW-3-4 **Removing and resetting disturbed Yarguntla / Shahabad / Talikot / PCC / Other types of slab lining set in CM 1 : 3** including flush cement mortar pointing in CM 1 : 3 with lead upto 50 m and all lifts.

Data:

RATE ANALYSISUNIT : **100 sqm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement 43 Gr	kg	101.00000	4.22	426.22
2	Sand (Screened)	cum	0.21000	728.00	152.88
Total cost of Materials				Rs:	579.10

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class I	Day	4.00000	710.00	2840.00
3	mazdoor	Day	6.00000	595.00	3570.00
4	Cartman with Double Bullock cart for water	Day	1.00000	710.00	710.00
Total cost of Labour				Rs:	7895.00

labour component/unit qty 79.00
 Add contractor's profit and overhead charges 13.615% 10.80
 labour component/unit qty (including contractor's profit) **89.80**

ABSTRACT:

A. Cost of Materials	Rs:	579.10
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	<u>7895.00</u>
Total	Rs:	<u>8474.10</u>
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1153.75
Total cost for 100.00 sqm	Rs:	9627.85
Rate per sqm (A+B+C+D)/100.0	Rs.	96.28

IRR-PMW-3-5 **Removing and resetting disturbed dry rubble / khandki stone pitching 25 to 45 cm**
 thick including packing, wedging, finishing etc., complete **with all leads and lifts.**

Data:

RATE ANALYSISUNIT : **100 sqm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	Mason Class II	Day	6.00000	640.00	3840.00
3	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	8185.00

labour component/unit qty 81.90
 Add contractor's profit and overhead charges 13.615% 11.20
 labour component/unit qty (including contractor's profit) **93.10**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	<u>8185.00</u>
Total	Rs:	<u>8185.00</u>
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	1114.39
Total cost for 100.00 sqm	Rs:	9299.39
Rate per sqm (A+B+C+D)/100.0	Rs.	92.99

IRR-PMW-3-6 **Removing and refixing disturbed chainage / demarcation / hectometre / guard stones**
 including excavation, back filling etc., complete **with all leads and lifts.**

DATA:

RATE ANALYSISUNIT : **18 Nos.****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	1965.00

labour component/unit qty 109.17
 Add contractor's profit and overhead charges 13.615% 14.86
 labour component/unit qty (including contractor's profit) **124.00**

ABSTRACT:

A. Cost of Materials		Rs:	0.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	1965.00
	Total	Rs:	1965.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	267.53
Total cost for	18.00 Nos.	Rs:	2232.53
Rate per each	(A+B+C+D)/18.0	Rs.	124.03

IRR-PMW-3-7 **Removing and refixing disturbed km stone / sign board / hecto-metre stone etc.,** including excavation, back filling with available stuff after refixing, forming base platform of size 90 x 90 x 7.5 cm including watering, ramming etc complete **with all leads and lifts.**

DATA:

RATE ANALYSIS

UNIT : 8 Nos.

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	1965.00

labour component/unit qty 245.63
 Add contractor's profit and overhead charges 13.615% 33.44
 labour component/unit qty (including contractor's profit) **279.10**

ABSTRACT:

A. Cost of Materials		Rs:	0.00
B. Hire charges of Machinery		Rs:	0.00
C. Cost of Labour		Rs:	1965.00
	Total	Rs:	1965.00
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	267.53
Total cost for	8.00 Nos.	Rs:	2232.53
Rate per each	(A+B+C+D)/18.0	Rs.	279.07

IRR-PMW-3-8 **Providing impervious hearting for breached / damaged portion of embankment** with soil from **approved borrow areas** in **layers of 10 to 15 cm** before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of **not less than 98 percent** or as stipulated **by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts.**

Data:

RATE ANALYSIS

UNIT : 480 cum

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer	Hour	5.00000	1651.08	8255.40
	Fuel / Energy charges	Hour	5.00000	1030.76	5153.80
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipppers 5.00 cum capacity 4 Nos.	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Pump 5 hp (diesel)	Hour	2.00000	10.34	20.68
	Fuel / Energy charges	Hour	2.00000	133.95	267.90
5	Water tanker 8000 ltr	Hour	4.00000	448.93	1795.72
	Fuel / Energy charges	Hour	4.00000	506.34	2025.36
6	Vibratory pad foot roller 8 tonne	Hour	6.00000	1330.63	7983.78
	Fuel / Energy charges	Hour	6.00000	1741.39	10448.34
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	82520.26

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	4.00000	369.20	1476.80
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	32.00000	276.90	8860.80
4	Crew for Pump	Hour	3.00000	173.47	520.41
5	Crew for Water tanker	Hour	5.00000	273.98	1369.90
6	Crew for Roller	Hour	6.00000	416.52	2499.12
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	21610.63

labour component/unit qty 45.00

Add contractor's profit and overhead charges 13.615% 6.10

labour component/unit qty (including contractor's profit) **51.10****ABSTRACT:**

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	82520.26
C. Cost of Labour	Rs:	21610.63
Total	Rs:	<u>104130.89</u>

D. Add for contractor's profit and overheads

on (A+B+C) 13.615% Rs: 14177.42

Total cost for 480.00 cum Rs: **118308.31****Rate per cum** (A+B+C+D)/480.0 Rs: **246.48**

IRR-PMW-3-9

Providing pervious/semi-pervious casing for breached / damaged portion of embankment with soil from **approved borrow areas** in layers of **10 to 15 cm** before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete **with initial lead upto 1 km and all lifts.**

Data:

RATE ANALYSISUNIT : **325 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	3.50000	1651.08	5778.78
	Fuel / Energy charges	Hour	3.50000	1030.76	3607.66
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipppers 5.00 cum capacity 3 Nos.	Hour	24.00000	483.37	11600.88
	Fuel / Energy charges	Hour	24.00000	506.34	12152.16
4	Pump 5 hp (diesel)	Hour	1.50000	10.34	15.51
	Fuel / Energy charges	Hour	1.50000	133.95	200.93
5	Water tanker 8000 ltr	Hour	3.00000	448.93	1346.79
	Fuel / Energy charges	Hour	3.00000	506.34	1519.02
6	Vibratory pad foot roller 8 tonne	Hour	4.00000	1330.63	5322.52
	Fuel / Energy charges	Hour	4.00000	1741.39	6965.56
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	63408.37

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.50000	369.20	1292.20
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	24.00000	276.90	6645.60
4	Crew for Pump	Hour	1.50000	173.47	260.21
5	Crew for Water tanker	Hour	3.00000	273.98	821.94
6	Crew for Roller	Hour	4.00000	416.52	1666.08
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	17569.63

labour component/unit qty 54.10

Add contractor's profit and overhead charges 13.615% 7.40

labour component/unit qty (including contractor's profit) **61.50****ABSTRACT:**

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	63408.37
C. Cost of Labour	Rs:	17569.63
Total	Rs:	<u>80978.00</u>

D. Add for contractor's profit and overheads

on (A+B+C) 13.615% Rs: 11025.15

Total cost for 325.00 cum Rs: **92003.15****Rate per cum** (A+B+C+D)/325.0 Rs: **283.09**

IRR-PMW-3-10 **Providing impervious hearning for breached / damaged portion of embankment** with soil from **approved dump areas** in **layers of 10 to 15 cm** before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of **not less than 98 percent** or as stipulated by **rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts.**

Data:

RATE ANALYSISUNIT : **612 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer	Hour	4.00000	1651.08	6604.32
	Fuel / Energy charges	Hour	4.00000	1030.76	4123.04
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tippers 5.00 cum capacity 5 Nos.	Hour	40.00000	483.37	19334.80
	Fuel / Energy charges	Hour	40.00000	506.34	20253.60
4	Pump 5 hp (diesel)	Hour	4.00000	10.34	41.36
	Fuel / Energy charges	Hour	4.00000	133.95	535.80
5	Water tanker 8000 ltr	Hour	7.00000	448.93	3142.51
	Fuel / Energy charges	Hour	7.00000	506.34	3544.38
6	Vibratory pad foot roller 8 tonne	Hour	7.50000	1330.63	9979.73
	Fuel / Energy charges	Hour	7.50000	1741.39	13060.43
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	95518.53

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	4.00000	369.20	1476.80
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	40.00000	276.90	11076.00
4	Crew for Pump	Hour	4.00000	173.47	693.88
5	Crew for Water tanker	Hour	7.00000	273.98	1917.86
6	Crew for Roller	Hour	7.50000	416.52	3123.90
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	26362.04

labour component/unit qty 43.10
 Add contractor's profit and overhead charges 13.615% 5.90
 labour component/unit qty (including contractor's profit) **49.00**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	95518.53
C. Cost of Labour	Rs:	26362.04
Total	Rs:	121880.57
D. Add for contractor's profit and overheads on (A+B+C)	13.615% Rs:	16594.04
Total cost for	612.00 cum Rs:	138474.61
Rate per cum	(A+B+C+D)/612.0 Rs:	226.27

IRR-PMW-3-11 **Providing pervious /semi-pervious casing for breached /damaged portion of embankment** with soil from **approved dump areas** in **layers of 10 to 15 cm** before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of **not less than 98 percent** or as stipulated by **rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts.**

Data:

RATE ANALYSISUNIT : **440 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	3.00000	1651.08	4953.24
	Fuel / Energy charges	Hour	3.00000	1030.76	3092.28
2	Shovel 0.50 cum capacity	Hour	8.00000	1048.36	8386.88
	Fuel / Energy charges	Hour	8.00000	803.71	6429.68
3	Tipplers 5.00 cum capacity 4 Nos.	Hour	32.00000	483.37	15467.84
	Fuel / Energy charges	Hour	32.00000	506.34	16202.88
4	Pump 5 hp (diesel)	Hour	3.00000	10.34	31.02
	Fuel / Energy charges	Hour	3.00000	133.95	401.85
5	Water tanker 8000 ltr	Hour	6.00000	448.93	2693.58
	Fuel / Energy charges	Hour	6.00000	506.34	3038.04
6	Vibratory pad foot roller 8 tonne	Hour	5.50000	1330.63	7318.47
	Fuel / Energy charges	Hour	5.50000	1741.39	9577.65
7	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	77675.41

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Crew for Dozer	Hour	3.00000	369.20	1107.60
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	32.00000	276.90	8860.80
4	Crew for Pump	Hour	3.00000	173.47	520.41
5	Crew for Water tanker	Hour	6.00000	273.98	1643.88
6	Crew for Roller	Hour	5.50000	416.52	2290.86
7	work inspector	Day	2.00000	775.00	1550.00
8	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	22497.15

labour component/unit qty 51.10

Add contractor's profit and overhead charges 13.615% 7.00

labour component/unit qty (including contractor's profit) **58.10****ABSTRACT:**

A. Cost of Materials Rs: 0.00

B. Hire charges of Machinery Rs: 77675.41

C. Cost of Labour Rs: 22497.15

Total Rs: 100172.56

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 13638.49

Total cost for 440.00 cum Rs: **113811.05****Rate per cum** (A+B+C+D)/440.0 Rs. **258.66**

IRR-PMW-3-12 **Repairing rain cuts / resectioning canal slopes to required lines and grades** as directed using available soil including dressing, clod breaking, packing, tamping etc., **complete with all leads and lifts.**

DATA:

RATE ANALYSISUNIT : **1000 sqm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	1.00000	775.00	775.00
2	mazdoor	Day	8.00000	595.00	4760.00
Total cost of Labour				Rs:	5535.00

labour component/unit qty 5.54

Add contractor's profit and overhead charges 13.615% 0.75

labour component/unit qty (including contractor's profit) **6.30****ABSTRACT:**

A. Cost of Materials Rs: 0.00

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 5535.00

Total Rs: 5535.00

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 753.59

Total cost for 1000.00 sqm Rs: **6288.59****Rate per sqm** (A+B+C+D)/1000.0 Rs. **6.29**

IRR-PMW-3-13 **Cleaning drainage gallery, adits, instrumentation galleries etc., by scrubbing / brushing** including chiselling and removing leached lime deposit and disposing off all the waste material out side adits in specified location etc., **complete with all leads and lifts.**

DATA:

RATE ANALYSISUNIT : **100 Rm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Wire brush	Each	5.00000	49.00	245.00
2	Coir brush	Each	10.00000	46.00	460.00
3	Sundries (brooms, gloves etc)	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	787.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Chiseller Cl II	Day	2.00000	640.00	1280.00
2	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	4850.00

labour component/unit qty 48.50

Add contractor's profit and overhead charges 13.615% 6.60

labour component/unit qty (including contractor's profit) **55.10****ABSTRACT:**

A. Cost of Materials Rs: 787.00

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 4850.00

Total Rs: 5637.00

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 767.48

Total cost for 100.00 Rm Rs: **6404.48****Rate per Rm** (A+B+C+D)/100.0 Rs. **64.04**IRR-PMW-3-14 **Cleaning dam parapet inner face and top using oxalic acid and water by scrubbing / brushing and washing to remove all surface coatings etc., complete .**

DATA:

RATE ANALYSISUNIT : **100 Rm****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Oxalic acid	ltr	5.00000	74.00	370.00
2	Wire brush	Each	5.00000	49.00	245.00
3	Coir brush	Each	10.00000	46.00	460.00
4	Sundries (brooms, gloves etc)	LS	2.00000	41.00	82.00
Total cost of Materials				Rs:	1157.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	3570.00

labour component/unit qty 35.70

Add contractor's profit and overhead charges 13.615% 4.90

labour component/unit qty (including contractor's profit) **40.60****ABSTRACT:**

A. Cost of Materials Rs: 1157.00

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 3570.00

Total Rs: 4727.00

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 643.58

Total cost for 100.00 Rm Rs: **5370.58****Rate per Rm** (A+B+C+D)/100.0 Rs. **53.71**IRR-PMW-3-20 **Excavation and removal of silt and silt mixed with sand from canal bed in dry condition including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **10 cum****A. MATERIALS:**

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	mazdoor	Day	4.00000	595.00	2380.00
Total cost of Labour				Rs:	2380.00

labour component/unit qty 238.00
 Add contractor's profit and overhead charges 13.615% 32.40
 labour component/unit qty (including contractor's profit) **270.40**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	2380.00
Total	Rs:	2380.00

D. Add for contractor's profit and overheads
 on (A+B+C) 13.615% Rs: 324.04
 Total cost for 10.00 cum Rs: **2704.04**
Rate per cum (A+B+C+D)/10.0 Rs. **270.40**

IRR-PMW-3-21 **Excavation and removal of silt or silt mixed with sand in slussy condition from canal bed**
 including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT : 12 cum

A. MATERIALS:

Sl No	particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total hire charges of Machinery				Rs:	0.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	mazdoor	Day	6.00000	595.00	3570.00
Total cost of Labour				Rs:	3570.00

labour component/unit qty 297.50
 Add contractor's profit and overhead charges 13.615% 40.50
 labour component/unit qty (including contractor's profit) **338.00**

ABSTRACT:

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	0.00
C. Cost of Labour	Rs:	3570.00
Total	Rs:	3570.00

D. Add for contractor's profit and overheads
 on (A+B+C) 13.615% Rs: 486.06
 Total cost for 12.00 cum Rs: **4056.06**
Rate per cum (A+B+C+D)/12.0 Rs. **338.01**

IRR-PMW-3-22 **Providing homogeneous embankment** using soil from **approved borrow**

New Item5 - 2010-11

(For Minor Works)

area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning,etc.,complete with initial lead upto 1 km and all lifts.

RATE ANALYSIS**A. MATERIALS:**

Unit: 807.00 cum

Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Angle dozer 90 hp	Hour	2.70000	1651.08	4457.92
	Fuel / Energy charges	Hour	2.70000	1030.76	2783.05
2	Shovel 0.85 cum capacity	Hour	8.00000	1751.36	14010.88
	Fuel / Energy charges	Hour	8.00000	1473.48	11787.84
3	Tippers 5.00 cum capacity 5 Nos.	Hour	40.00000	483.37	19334.80
	Fuel / Energy charges	Hour	40.00000	506.34	20253.60
Total hire charges of Machinery				Rs:	72628.09

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Dozer	Hour	2.70000	369.20	996.84
2	Crew for Shovel	Hour	8.00000	369.20	2953.60
3	Crew for Tipper	Hour	40.00000	276.90	11076.00
4	work inspector	Day	1.00000	775.00	775.00
5	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	16991.44

labour component/unit qty 21.10

Add contractor's profit and overhead charges 13.615% 2.90

labour component/unit qty (including contractor's profit) **24.00****ABSTRACT:**

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	72628.09
C. Cost of Labour	Rs:	16991.44
Total	Rs:	89619.53
D. Add for contractor's profit and overheads on (A+B+C)	Rs:	12201.7
Total cost for	Rs:	101821.23
Rate per cum	Rs:	126.17

IRR-PMW-3-23

New Item 6 - 2010-11

(For Minor Works)

Providing homogeneous embankment using soil from **approved borrow area** in **layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all operations such as watering, compacting to density control of **not less than 95 percent** or as stipulated using **8T roller etc., complete with initial lead upto 1 km and all lifts.**

RATE ANALYSIS

A. MATERIALS:		UNIT : 807.00 cum			
Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00

B. MACHINERY:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Angle dozer 90 hp	Hour	2.70000	1651.08	4457.92
	Fuel / Energy charges	Hour	2.70000	1030.76	2783.05
2	Pump 5 hp (ele)	Hour	4.00000	3.15	12.60
	Fuel / Energy charges	Hour	4.00000	42.30	169.20
3	Water tanker 8000 ltr	Hour	8.00000	448.93	3591.44
	Fuel / Energy charges	Hour	8.00000	506.34	4050.72
4	Vibratory pad foot roller 8 tonne	Hour	6.40000	1330.63	8516.03
	Fuel / Energy charges	Hour	6.40000	1741.39	11144.90
5	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	34807.86

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Crew for Dozer	Hour	2.70000	369.20	996.84
4	Crew for Pump	Hour	4.00000	130.08	520.32
5	Crew for Water tanker	Hour	8.00000	273.98	2191.84
6	Crew for Roller	Hour	6.40000	416.52	2665.73
7	work inspector	Day	1.00000	775.00	775.00
8	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	8339.73

labour component/unit qty 10.30

Add contractor's profit and overhead charges 13.615% 1.40

labour component/unit qty (including contractor's profit) **11.70****ABSTRACT:**

A. Cost of Materials	Rs:	0.00
B. Hire charges of Machinery	Rs:	34807.86
C. Cost of Labour	Rs:	8339.73
Total	Rs:	43147.59
D. Add for contractor's profit and overheads on (A+B+C)	Rs:	5874.54
Total cost for	Rs:	49022.13
Rate per cum	Rs:	60.75

IRR-PMW-3-24

New Item 7 - 2010-11

Providing homogeneous embankment using soil from **approved borrow area** in **layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all operations such as compacting to density control of **not less than 90 percent** or as stipulated using **2T roller etc., complete with initial lead upto 1 km and all lifts.**

RATE ANALYSIS

A. MATERIALS:		UNIT : 807.00 cum			
Sl No	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs
1	NIL		0.00000	0.00	0.00
			0.00000	0.00	0.00
Total cost of Materials				Rs:	0.00
B. MACHINERY:					
Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs
1	Tractor with 2T Roller	Hour	10.00000	500.00	5000.00
2	Sundries	LS	2.00000	41.00	82.00
Total hire charges of Machinery				Rs:	5082.00

C. LABOUR:

Sl No	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	work inspector	Day	0.50000	775.00	387.50
2	mazdoor	Day	2.00000	595.00	1190.00
Total cost of Labour				Rs:	1577.50

labour component/unit qty 2.00
 Add contractor's profit and overhead charges 13.615% 0.30
 labour component/unit qty (including contractor's profit) **2.30**

ABSTRA**CT:**

A. Cost of Materials		Rs:	0.00
B. Hire charges of Machinery		Rs:	5082.00
C. Cost of Labour		Rs:	1577.50
Total		Rs:	6659.50
D. Add for contractor's profit and overheads	13.615%	Rs:	906.69
Total cost for	807.00 cum	Rs:	7566.19
Rate per cum	(A+B+C+D)/807	Rs:	9.38

IRR-PMW-3-25

Weed Removal by Manual Means

(New Item

2012-13-3)

IRR-PMW-3-25(a)

Removal of Water Hyacinth up to 30 cm thick**RATE ANALYSIS**Unit : **2000 Sqm****A. MATERIALS**

Sl. No.	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total Cost of Materials				Rs.	0.00

B. MACHINERY

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total hire charges of Machinery				Rs.	0.00

C. LABOUR

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Work Inspector	Day	3.50000	775.00	2712.50
2	Mazdoor	Day	28.00000	595.00	16660.00
Total Cost of Labour				Rs.	19372.50

ABSTRACT:

A.COST OF MATERIALS		Rs.	0.00
B.COST OF MACHINERY		Rs.	0.00
C.COST OF LABOUR		Rs.	19372.50
Total			19372.50
D. Add for Contractor's Profit and overheads	13.615%		2637.57
Total Cost for removal weed in the extent of	2000 Sqm		22010.07
Rate per Sqm	(A+B+C+D)/2000		11.01

IRR-PMW-3-25(b)

Removal of Water Hyacinth beyond 30 cm thick**RATE ANALYSIS**Unit : **2000 Sqm****A. MATERIALS**

Sl. No.	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total Cost of Materials				Rs.	0.00

B. MACHINERY

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total hire charges of Machinery				Rs.	0.00

C. LABOUR

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Work Inspector	Day	5.00000	775.00	3875.00
2	Mazdoor	Day	38.00000	595.00	22610.00
Total Cost of Labour				Rs.	26485.00

ABSTRACT:

A.COST OF MATERIALS		Rs.	0.00
B.COST OF MACHINERY		Rs.	0.00
C.COST OF LABOUR		Rs.	26485.00
Total			26485.00
D. Add for Contractor's Profit and overheads	13.615%		3605.93
Total Cost for removal weed in the extent of	2000 Sqm		30090.93
Rate per Sqm	(A+B+C+D)/2000		15.05

IRR-PMW-3-25(c) **Clearing Alchi Tilla**
RATE ANALYSISUnit : **2000 Sqm****A. MATERIALS**

Sl. No.	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total Cost of Materials				Rs.	0.00

B. MACHINERY

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total hire charges of Machinery				Rs.	0.00

C. LABOUR

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Work Inspector	Day	3.00000	775.00	2325.00
2	Mazdoor	Day	26.00000	595.00	15470.00
Total Cost of Labour				Rs.	17795.00

ABSTRACT:

A.COST OF MATERIALS	Rs.	0.00
B.COST OF MACHINERY	Rs.	0.00
C.COST OF LABOUR	Rs.	17795.00
Total		17795.00
D. Add for Contractor's Profit and overheads	13.615%	2422.79
Total Cost for removal weed in the extent of 2000 Sqm		20217.79
Rate per Sqm	(A+B+C+D)/2000	10.11

IRR-PMW-3-25(d) **Removal of Jammu**
RATE ANALYSISUnit : **2000 Sqm****A. MATERIALS**

Sl. No.	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total Cost of Materials				Rs.	0.00

B. MACHINERY

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total hire charges of Machinery				Rs.	0.00

C. LABOUR

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Work Inspector	Day	2.50000	775.00	1937.50
2	Mazdoor	Day	22.00000	595.00	13090.00
Total Cost of Labour				Rs.	15027.50

ABSTRACT:

A.COST OF MATERIALS	Rs.	0.00
B.COST OF MACHINERY	Rs.	0.00
C.COST OF LABOUR	Rs.	15027.50
Total		15027.50
D. Add for Contractor's Profit and overheads	13.615%	2045.99
Total Cost for removal weed in the extent of 2000 Sqm		17073.49
Rate per Sqm	(A+B+C+D)/2000	8.54

IRR-PMW-3-25(e) **Removal of Imponea, Cornea**
RATE ANALYSISUnit : **2000 Sqm****A. MATERIALS**

Sl. No.	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total Cost of Materials				Rs.	0.00

B. MACHINERY

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total hire charges of Machinery				Rs.	0.00

C. LABOUR

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Work Inspector	Day	3.00000	775.00	2325.00
2	Mazdoor	Day	26.00000	595.00	15470.00
Total Cost of Labour				Rs.	17795.00

ABSTRACT:

A.COST OF MATERIALS	Rs.	0.00
B.COST OF MACHINERY	Rs.	0.00
C.COST OF LABOUR	Rs.	17795.00
Total		17795.00
D. Add for Contractor's Profit and overheads	13.615%	2422.79
Total Cost for removal weed in the extent of 2000 Sqm		20217.79
Rate per Sqm	(A+B+C+D)/2000	10.11

IRR-PMW-3-25(f) **Removal of Natchu, goobi, thooti, etc.****RATE ANALYSIS**Unit : **2000 Sqm****A. MATERIALS**

Sl. No.	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total Cost of Materials				Rs.	0.00

B. MACHINERY

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	NIL		0.00000	0.00	0.00
Total hire charges of Machinery				Rs.	0.00

C. LABOUR

Sl. No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Work Inspector	Day	1.20000	775.00	930.00
2	Mazdoor	Day	8.00000	595.00	4760.00
Total Cost of Labour				Rs.	5690.00

ABSTRACT:

A.COST OF MATERIALS	Rs.	0.00
B.COST OF MACHINERY	Rs.	0.00
C.COST OF LABOUR	Rs.	5690.00
Total		5690.00
D. Add for Contractor's Profit and overheads	14%	774.69
Total Cost for removal weed in the extent of 2000 Sqm		6464.69
Rate per Sqm	(A+B+C+D)/2000	3.23

IRR-PMW-3-26
New Item
2015-16-8**PAINTING OF SLUICES FOR MAINTENANCE WORKS**

Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning, applying primary coat with **one coat** of Zinc rich epoxy primer to a thickness of 100 microns, followed by finishing coats **2 coats** with Coal tar epoxy with material, labour, and all accessories with all leads and lifts.

Data:
A. Materials**Rate Analysis**Unit: **100 Sqm**

Sl. No.	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Rust Cleaner/ Inhibitor	ltr	13.00000	150.00	1950.00
2	Zinc rich epoxy primer	ltr	14.00000	675.00	9450.00
3	Thinner@10%	ltr	1.40000	113.00	158.20
4	Coal Tar epoxy paint	ltr	40.00000	221.00	8840.00
5	Thinner@10%	ltr	4.00000	113.00	452.00
6	Wire Brush	ltr	2.00000	49.00	98.00
7	Sundries (brushes, Ladders, platforms)	LS	3.00000	41.00	123.00
Total Cost of Materials				Rs.	21071.20

B. Machinery

Sl. No.	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
	NIL				
Total Cost of Machinery					0.00

C. Labour

Sl. No.	Particulars	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Painter Class-II	Day	20.00000	640.00	12800.00
2	Helper	Day	20.00000	595.00	11900.00
Total Cost of Machinery				Rs.	24700.00

Labour Component/ Unit Qty. 247
Add Contractor's Profit and and Overhead Charges @ 13.615% 33.62905
Labour Component/ Unit Qty (including contractor' profit) **280.62905**

ABSTRACT:

A. Cost of Materials:		21071.20
B. Hire Charges of Machinery		0.00
C. Cost of Labour		24700.00
Total		45771.20
D. Add for Excise Duty on 75% cost excluding cost of mater	0%	0.00
Total		45771.20
E. Add for transportation Charges upto worksite @	3%	1373.14
Total		47144.34
F. Add for Contractor's Profit and Overhead Charges @	13.615%	6418.70
Total Cost per 100 Sqm		53563.04
Rate per Sqm		535.63

IRR-PMW-3-27
New Item 2018-19

**A. Lifting of water from rivers/drains to agricultural fields and where there is no element of excavation-
Water lifting charges using Electrical driven pump**

Rate Analysis

MACHINERY:				Hp_hr calculation					
SI No	Description	Unit	Quantity	5 hP		10 HP		20 HP	
				Rate in Rs.	Amount in Rs.	Rate in Rs.	Amount in Rs.	Rate in Rs.	Amount in Rs.
1	Electric pump	Hour	1.00000	3.15	3.15	7.03	7.03	13.18	13.18
2	Fuel / Energy charges	Hour	1.00000	42.30	42.30	84.60	84.60	169.19	169.19
3	Total hire charges of Machinery	per hour			45.45		91.63		182.37
4	Add Contractor's Profit and Overheads		@	0.13615	6.19		12.48		24.83
5	Total hire charges of Machinery			per hour	51.64		104.11		207.20
6	Total hire charges of Machinery			per hphr	10.33		10.41		10.36
7	Average of three			per hphr	10.37				

Other pumping arrangements including pipes, labour, pump operator etc.,

A. MATERIALS:

Per Hr.

SI No	Particulars	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Use rate of G.I.pipe 100 mm dia	Hour	1.00000	7.35	7.35
2	Sundries (Starter/Switches etc)	LS	0.20000	41.00	8.20
	Total cost of Materials			Rs:	15.55
B. LABOUR:					
SI No	Description	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Crew charges for Pump	Hour	1.00000	130.08	130.08
2	Laying & dismantling pipe	LS	0.05000	41.00	2.05
3	mazdoor	Day	0.10000	595	59.50
	Total cost of Labour			Rs:	191.63
	Total cost for Materials and Labour	per hour			207.18
	Add Contractor's Profit and and Overhead Charges @	13.615%			28.21
	Total cost of Materials and Labour	per hour			235.39

**B. Lifting of water from rivers/drains to agricultural fields and where there is no element of excavation-
Water lifting charges using Diesel driven pump**

Rate Analysis

MACHINERY:				Hp_hr calculation					
SI No	Description	Unit	Quantity	5 HP		10 HP		20 HP	
				Rate in Rs.	Amount in Rs.	Rate in Rs.	Amount in Rs.	Rate in Rs.	Amount in Rs.
1	Diesel Pump	Hour	1.0000	10.34	10.34	16.25	16.25	51.30	51.30
2	Fuel / Energy charges	Hour	1.0000	133.95	133.95	267.90	267.90	535.81	535.81
3	Total hire charges of Machinery			per hour	144.29		284.15		587.11
4	Add Contractor's Profit and Overheads		@	0.13615	19.65		38.69		79.94
5	Total hire charges of Machinery			per hour	163.94		322.84		667.1
6	Total hire charges of Machinery			per hphr	32.79		32.28		33.35
7	Average of the above three			per hphr	32.81				

Other pumping arrangements including pipes, labour, pump operator etc.,

A. MATERIALS:

Per Hr.

SI No	Particulars	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Use rate of G.I.pipe 100 mm dia	Hour	1.0000	7.35	7.35
2	expenses)	LS	0.2000	41.00	8.20
	Total cost of Materials			Rs:	15.55
B. LABOUR:					
SI No	Description	Unit	Quantity	Rate	Amount
				in Rs.	in Rs.
1	Crew charges for Pump	Hour	1.0000	173.47	173.47
2	Laying & dismantling pipe	LS	0.0500	41.00	2.05
3	mazdoor	Day	0.1000	595	59.50
	Total cost of Labour			Rs:	235.02
	Total cost for Materials and Labour	per hour			250.57
	Add Contractor's Profit and and Overhead Charges @	13.615%			34.12
	Total cost of Materials and Labour	per hour			284.69

(Common to all Departments)

Index_code		
COM_MWRK	A. Manual Works	
COM_MWRK-1	New extra items-- common item for all earth works using only manual labour for all other works without involving contractors (Manual) Excavation in all kinds of soil including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) With 3 Cum per day output	per cum 198.33
COM_MWRK-2	(Manual)Excavation in all kinds of soil/ HDR including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) With 2.5 Cum per day output	per cum 238.00
COM_MWRK-3	(Manual) Excavation in soft rock (including F&F) without blasting, including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structuresand placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) Soft rock 1.33 Cum / Day	per cum 447.37
COM_MWRK-4	(Manual)Excavation in hard rock, including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) Hard rock 0.67Cum/ day	per cum 888.06

COM-LDLFT

Chapter VII

LEAD/LIFT/LOADING & UNLOADING CHARGES
(WILL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)
FOR THE YEAR : 2024-25

LEAD, LIFT, LOADING AND UNLOADING CHARGES FOR MATERIALS

COM-LDLFT

1. For total lead upto 150 m (including initial lead) lead charges by head load only shall be adopted irrespective of mode of conveyance.
2. For total lead exceeding 150 m conveyance by mechanical means only shall be adopted irrespective of mode of conveyance.
3. The rates for loading at quarry including idle hire charges of trucks and hire charges per for each kilometer and upto 5 km are cumulative and inclusive of total charges for preceding lead.
4. Unless otherwise specified lead charges for Earth / Sand / Gravel / Aggregates and Stones are for loose volume and not for compacted or in-situ volume.
5. The rates for lift charges, lead charges, hire charges are cumulative and inclusive of rates for preceding lift, lead and hire charges
6. Lift charges are not payable where conveyance of materials is by mechanical means to final placing point.
7. Loading and unloading charges are not payable for conveyance by head load.
8. Loading charges are not payable for conveyance by mechanical means for disposal of excavated materials beyond initial lead of 50 m wherever specified.
9. Loading and unloading charges are not payable for conveyance by mechanical means for disposal of excavated materials beyond initial lead of 1 km wherever specified.
10. The rates for unloading of materials except earth, sand, gravel, coarse aggregate, rubble, size stone and cut stone are inclusive of stacking.
11. Hire charges are per 1KM for tippers and trucks for transport of materials from work site to dump yard & other places are cumulative and includes previous km upto 5 kms
12. The lead & lift charges are exclusive of contractor's profit and overhead charges of 13.615%
13. The loading & unloading charges are exclusive of contractor's profit and overhead charges of 13.615%
14. During the BoCE meeting held on 10.06.2015, the BoCEs has recommended to withdraw lead charges, loading and unloading charges for Cement as per the minutes of meeting of Sub-Committee held on 29.06.2015. (The conveyance charges, loading & unloading charges for cement are displayed for information purpose only).
15. As per the BOCE meeting held on 21.08.2019 in order to simplify the procedure of adding lead charges to the data items in the CFMS work module, the BOCE recommended to delete the contractor profit and over head charges from the calculation of Lead, Lift, Loading and Unloading charges. But at the time of preparation of estimates the contractor profit and over head charges on Lead, Lift, Loading and Unloading charges shall be added as usual.

FOR THE YEAR: 2024-25

COM-LDLFT-1

A. (Lead) Conveyance Charges for materials by head load

Sl No.	Total distance (Total lead includes initial lead)	Earth / Sand /Gravel / Murrum/ Lime/ Surki/ Size stone / Cut stone Rubble / Coarse aggregate Rs/ Cum	Cement / Reinforce- ment steel Str steel Rs / tonne	PCC slab/ Shahbad slab / CC block/ BS slab/ Late-rite / Wood Rs / cum
1	2	3	4	5
1	Total lead upto 50 m (covered by item rate)	initial lead	initial lead	initial lead
2	Total lead upto 100 m	85.00	49.58	108.18
3	Total lead upto 150 m	170.00	99.17	216.36

Notes: 1. No loading or unloading charges are admissible for conveyance by head load.
 2. For total lead exceeding 150 m conveyance charges by mechanical means only shall be adopted irrespective of mode of conveyance.

COM-LDLFT-2

**B. (Lead) Conveyance charges for machinery per kilometer for transporting materials
 by tippers and trucks excluding loading, unloading and idle hire charges of machinery.**
FOR THE YEAR: 2024-25

(No loading and unloading charges allowed for machinery loading and unloading)

Sl No.	Distance	(Lead) charges for tippers for Earth / Sand /Gravel / Murrum/ Lime/ Surki/ per cu.meter	(Lead) charges for trucks for Rubble/Size stones/ Cut Stones/ Coarse aggregate per cu.meter	(Lead) charges for trucks for Cement/ Steel/ RCC poles/ AC & GI sheets/ Packed materials/tonne	(Lead) charges for trucks per cu.meter for PCC slabs/ Shahabad slabs/ CC & Laterite blocks/ Wood/ cum	(Lead) charges for per Cu.m. for water/ 1000 litres	(Lead) charges for trucks per 1000 Nos. of Bricks
1	2	3	4	5	6	7	8
1	Lead upto 1 km	38.00	36.54	22.84	53.74	23.05	60.90
2	Lead upto 2 km	53.20	51.16	31.97	75.23	32.27	85.26
3	Lead upto 3 km	70.93	68.21	42.63	100.31	43.02	113.68
4	Lead upto 4 km	86.13	82.82	51.77	121.80	52.24	138.04
5	Lead upto 5 km	101.33	97.44	60.90	143.30	61.46	162.40
6	for Every km beyond 5 km upto 30 km	15.20	14.62	9.14	21.49	9.22	24.36
7	for Every km beyond 30 km	12.67	12.18	7.61	17.91	7.68	20.30

COM-LDLFT-3

C. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (idle hire charges of trucks are not added)

Sl No.	Description of item	Earth / Sand /Gravel / Murrum/ / Surki/ Rs / cum	Rubble/ size stone/ cut stone/ Coarse aggregate,Li me in Rs/cum	cement in Rs/tonne	steel in Rs./tonne	brick work Rs/1000 No
1	2	3	4	5	6	7
1	Loading	28.21	56.42	93.09	111.58	77.58
2	Unloading	14.11	28.21	93.09	111.58	77.58

COM-LDLFT-4

D. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (including idle hire charges of trucks)

Sl No.	Description of item	Earth / Sand /Gravel / Murrum/ / Surki/ Rs / cum	Rubble/ size stone/ cut stone/ Coarse aggregate,Li me in Rs/cum	cement in Rs/tonne	steel in Rs./tonne	brick work Rs/1000 No
1	2	3	4	5	6	7
1	Loading	138.94	167.15	214.89	233.38	278.55
2	Unloading	50.87	83.58	214.89	233.38	278.55

E. LOADING AND UNLOADING CHARGES BY MECHANICAL MEANS (including idle hire charges of trucks)

Sl No.	Description of item	Earth / Sand /Gravel / Murrum/ / Surki/ Rs / cum	Rubble/ size stone/ cut stone/ Coarse aggregate,Li me in Rs/cum
1	2	3	4
1	Loading	60.12	119.48
2	Unloading	19.19	19.19

COM-LDLFT-5

F. LIFT CHARGES FOR MATERIALS BY HEAD LOAD

Sl No.	Total lift (Total lift includes initial lift)	Earth / Sand /Gravel / Murrum/ Lime/ Surki/ Size stone / Cut stone / Rubble / Coarse aggregate Rs / cum	Cement / Reinforce-ment steel Str steel Rs / tonne	PCC slab/ Shahbad slab / CC block/ BS slab / Laterite / Wood Rs / cum
1	2	3	4	5
1	Total lift upto 3 m (covered by item rate)	Initial lift	Initial lift	Initial lift
2	For Every 1.00 Lift beyond initial lift of 3 meters	9.92	7.17	13.22

COM-LDLFT-6

DETAILED DATA**LEAD / LIFT / LOADING & UNLOADING CHARGES - DATA RATES****I. GENERAL DATA FOR LEAD / LIFT / LOADING & UNLOADING:****A. DATA FOR LEAD CHARGES BY HEAD LOAD :**

For the purpose of working out conveyance charges by head load the category of materials as classified in (I) above are grouped together as under :

CATEGORY : Earth / Sand / Gravel / Murrum / Lime / Surki / Coarse aggregate / Rubble stone / Size stone / Cut stone

In this group materials which are comparatively lighter and generally conveyed by head load by light / heavy mazdoor are included. Method of conveyance, approximate weight per load and time required to cover specified additional distance will be generally same Therefore common data is considered for conveyance by head load for materials under this category.

CATEGORY : Cement in bag / Reinforcement steel / Structural steel sections
In this group the materials in packed / rolled / fabricated condition which are heavier per load compared to the materials under Category above and which can not be split into small quantities for the purpose of conveyance are included. The unit of measurement for these materials is per tonne.

CATEGORY : PCC slab / Shahabad stone slab / CC block / Laterite stone / BS slab / Wood
In this group the materials in moulded condition / cut to standard size which are heavier per load compared to materials under Category above are included.

COM-DTL-LDLFT-1

A. (Lead) Conveyance Charges for materials by head load

CATEGORY : Earth / Sand / Gravel / Murrum / Lime / Surki / Coarse aggregate / Rubble stone / Size stone / Cut stone

Lead: Upto 50 m :

This is initial lead and cost is covered under item basic rate.

Lead: Upto 100 m :

Average distance to be covered beyond initial lead of 50 m 25 m
Average speed of conveyance by head load 60 m / minute
Round trip cycle time for 25 m considering 50 min/ hr working
(2 x 25 x 60 / 50 / 60) 1 min
No. of trips per day for additional lead (8 x 60 / 1) 480
Quantity of material by head load per load 0.015 cum
Quantity of material by head load per day (480 x 0.015) say 7 cum
Deploy one mazdoor for every 50 m additional lead beyond initial lead.
Unit: 7 cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mazdoor	Day	1.0000	595.00	595.00
Total for materials under this Category for		7.00	cum	Rs:	595.00
		Rate per	cum	Rs:	85.00

Lead: Upto 150 m :

Average distance to be covered beyond initial of 50 m : 50 m
Deploy two mazdoors for conveyance beyond initial lead.
Unit: 7 cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mazdoor	Day	2.0000	595.00	1190.00
Total for materials under this Category for		7.00	cum	Rs:	1190.00
		Rate per	cum	Rs:	170.00

CATEGORY : Cement in bag / Reinforcement steel / Structural steel sections**Lead: Upto 50 m :**

This is initial lead and cost is covered under item basic rate.

Lead: Upto 100 m :

Average distance to be covered beyond initial lead of 50 m 25 m
Average speed of conveyance by head load 30 m / minute
Round trip cycle time for 25 m considering 50 min/ hr working
(2 x 25 x 60 / 50 / 30) 2 min
No. of trips per day for lead upto 100 m (8 x 60 / 2) 240
Quantity of material by head load per load 50 kg
Quantity of material by head load per day (240 x 50 / 1000) 12 tonne
Deploy one mazdoor for every 50 m additional lead beyond initial lead.
Unit: 12 tonne

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement /steel handling mazdoor	Day	1.0000	595.00	595.00
Total for materials under this Category for		12.00	tonne	Rs:	595.00
		Rate per	tonne	Rs:	49.58

Lead: Upto 150 m :

Average distance to be covered beyond initial of 50 m : 50 m
 Deploy two mazdoors for conveyance beyond initial lead.

Unit: 12 tonne

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Cement /steel handling Mazdoor	Day	2.0000	595.00	1190.00
Total for materials under this Category for		12.00	tonne	Rs:	1190.00
		Rate per	tonne	Rs:	99.17

CATEGORY : PCC slab / Shahabad stone slab / CC block / Laterite stone / BS slab / Wood**Lead: Upto 50 m :**

This is initial lead and cost is covered under item basic rate.

Lead: Upto 100 m :

Average distance to be covered beyond initial lead of 50 m 25 m
 Average speed of conveyance by head load 40 m / minute
 Round trip cycle time for 25 m considering 50 min/ hr working
 (2 x 25 x 60 / 50 / 40) 1.5 min
 No. of trips per day for lead upto 100 m (8 x 60 / 1.5) 320
 Quantity of material by head load per load 0.017 cum
 Quantity of material by head load per day (320 x 0.017) say 5.5 cum
 Deploy one mazdoor for every 50 m additional lead beyond initial lead.

Unit: 5.5 cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mazdoor	Day	1.0000	595.00	595.00
Total for materials under this Category for		5.50	cum	Rs:	595.00
		Rate per	cum	Rs:	108.18

Lead: Upto 150 m :

Average distance to be covered beyond initial of 50 m : 50 m
 Deploy two mazdoors for conveyance beyond initial lead.

Unit: 5.5 cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Mazdoor	Day	2.0000	595.00	1190.00
Total for materials under this Category for		5.50	cum	Rs:	1190.00
		Rate per	cum	Rs:	216.36

COM-DTL-LDLFT-2

B.(Lead) Conveyance charges for machinery per kilometer for transporting materials by tippers and trucks excluding loading, unloading and idle hire charges of machinery.**CATEGORY : Earth / Sand / Gravel / Murrum / Lime / Surki /**

For total lead upto 1 km			Unit: 5 cum		
Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tipper hire charges	Hour	0.1500	483.37	72.51
	Fuel charges	Hour	0.1500	506.34	75.95
2	Crew charges	Hour	0.1500	276.90	41.54
			Total Rs:		190.00
Total for		5	cum	Rs:	190.00
		Rate per cum			38.00

For total lead more than 1 km upto 2 km			Unit: 5 cum		
Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tipper hire charges	Hour	0.2100	483.37	101.51
	Fuel charges	Hour	0.2100	506.34	106.33
2	Crew charges	Hour	0.2100	276.90	58.15
			Total Rs:		265.99
Total for		5	cum	Rs:	265.99
		Rate per cum			53.20

For total lead more than 2 km upto 3 km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tipper hire charges	Hour	0.2800	483.37	135.34
	Fuel charges	Hour	0.2800	506.34	141.78
2	Crew charges	Hour	0.2800	276.90	77.53
			Total Rs:		354.65
	Total for	5	cum	Rs:	354.65
	Rate per cum				70.93

For total lead more than 3 km upto 4 km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tipper hire charges	Hour	0.3400	483.37	164.35
	Fuel charges	Hour	0.3400	506.34	172.16
2	Crew charges	Hour	0.3400	276.90	94.15
			Total Rs:		430.66
	Total for	5	cum	Rs:	430.66
	Rate per cum				86.13

For total lead more than 4 km upto 5 km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tipper hire charges	Hour	0.4000	483.37	193.35
	Fuel charges	Hour	0.4000	506.34	202.54
2	Crew charges	Hour	0.4000	276.90	110.76
			Total Rs:		506.65
	Total for	5	cum	Rs:	506.65
	Rate per cum				101.33

For lead beyond 5 km upto 30 km for every km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tipper hire charges	Hour	0.0600	483.37	29.00
	Fuel charges	Hour	0.0600	506.34	30.38
2	Crew charges	Hour	0.0600	276.90	16.61
			Total Rs:		75.99
	Total for	5	cum	Rs:	75.99
	Rate per cum				15.20

For lead beyond 30 km for every km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Tipper hire charges	Hour	0.0500	483.37	24.17
	Fuel charges	Hour	0.0500	506.34	25.32
2	Crew charges	Hour	0.0500	276.90	13.85
			Total Rs:		63.34
	Total for	5	cum	Rs:	63.34
	Rate per cum				12.67

CATEGORY : Coarse aggregate / Rubble stone / Size stone / Cut stone

For total lead upto 1 km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.1500	437.69	65.65
	Fuel charges	Hour	0.1500	506.34	75.95
2	Crew charges	Hour	0.1500	273.98	41.10
			Total Rs:		182.70
	Total for	5	cum	Rs:	182.70
	Rate per cum				36.54

For total lead more than 1 km upto 2 km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.2100	437.69	91.91
	Fuel charges	Hour	0.2100	506.34	106.33
2	Crew charges	Hour	0.2100	273.98	57.54
			Total Rs:		255.78
	Total for	5	cum	Rs:	255.78
	Rate per cum				51.16

For total lead more than 2 km upto 3 km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.2800	437.69	122.55
	Fuel charges	Hour	0.2800	506.34	141.78
2	Crew charges	Hour	0.2800	273.98	76.71
			Total Rs:		341.04
	Total for	5	cum	Rs:	341.04
	Rate per cum				68.21

For total lead more than 3 km upto 4 km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.3400	437.69	148.81
	Fuel charges	Hour	0.3400	506.34	172.16
2	Crew charges	Hour	0.3400	273.98	93.15
			Total Rs:		414.12
	Total for	5	cum	Rs:	414.12
	Rate per cum				82.82

For total lead more than 4 km upto 5 km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.4000	437.69	175.08
	Fuel charges	Hour	0.4000	506.34	202.54
2	Crew charges	Hour	0.4000	273.98	109.59
			Total Rs:	0.00	487.21
	Total for	5	cum	Rs:	487.21
	Rate per cum				97.44

For lead beyond 5 km upto 30 km for every km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.0600	437.69	26.26
	Fuel charges	Hour	0.0600	506.34	30.38
2	Crew charges	Hour	0.0600	273.98	16.44
			Total Rs:		73.08
	Total for	5	cum	Rs:	73.08
	Rate per cum				14.62

For lead beyond 30 km for every km

Unit: 5

cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.0500	437.69	21.88
	Fuel charges	Hour	0.0500	506.34	25.32
2	Crew charges	Hour	0.0500	273.98	13.70
			Total Rs:		60.90
	Total for	5	cum	Rs:	60.90
	Rate per cum				12.18

CATEGORY : Cement/ Steel/ Pipes/ RCC poles/ AC & GI sheets/ Packed materials

For total lead upto 1 km

Unit: 8

tonne

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.1500	437.69	65.65
	Fuel charges	Hour	0.1500	506.34	75.95
2	Crew charges	Hour	0.1500	273.98	41.10
			Total Rs:		182.70
	Total for	8	tonne	Rs:	182.70
	Rate per tonne				22.84

For total lead more than 1 km upto 2 km

Unit: 8

tonne

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.2100	437.69	91.91
	Fuel charges	Hour	0.2100	506.34	106.33
2	Crew charges	Hour	0.2100	273.98	57.54
			Total Rs:		255.78
	Total for	8	tonne	Rs:	255.78
	Rate per tonne				31.97

For total lead more than 2 km upto 3 km

Unit: 8

tonne

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.2800	437.69	122.55
	Fuel charges	Hour	0.2800	506.34	141.78
2	Crew charges	Hour	0.2800	273.98	76.71
			Total Rs:		341.04
	Total for	8	tonne	Rs:	341.04
	Rate per tonne				42.63

For total lead more than 3 km upto 4 km

Unit: 8

tonne

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.3400	437.69	148.81
	Fuel charges	Hour	0.3400	506.34	172.16
2	Crew charges	Hour	0.3400	273.98	93.15
			Total Rs:		414.12
	Total for	8	tonne	Rs:	414.12
	Rate per tonne				51.77

For total lead more than 4 km upto 5 km			Unit:	8	tonne
SI No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.4000	437.69	175.08
	Fuel charges	Hour	0.4000	506.34	202.54
2	Crew charges	Hour	0.4000	273.98	109.59
			Total Rs:		487.21
	Total for	8	tonne	Rs:	487.21
	Rate per tonne				60.90

For lead beyond 5 km upto 30 km for every km			Unit:	8	tonne
SI No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.0600	437.69	26.26
	Fuel charges	Hour	0.0600	506.34	30.38
2	Crew charges	Hour	0.0600	273.98	16.44
			Total Rs:		73.08
	Total for	8	tonne	Rs:	73.08
	Rate per tonne				9.14

For lead beyond 30 km for every km			Unit:	8	tonne
SI No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.0500	437.69	21.88
	Fuel charges	Hour	0.0500	506.34	25.32
2	Crew charges	Hour	0.0500	273.98	13.70
			Total Rs:		60.90
	Total for	8	tonne	Rs:	60.90
	Rate per tonne				7.61

CATEGORY : PCC slabs/ Shahabad slabs/ BS slabs/ CC & Laterite blocks/ Wood

For total lead upto 1 km			Unit:	3.4	cum
SI No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.1500	437.69	65.65
	Fuel charges	Hour	0.1500	506.34	75.95
2	Crew charges	Hour	0.1500	273.98	41.10
			Total Rs:		182.70
	Total for	3.4	cum	Rs:	182.70
	Rate per cum				53.74

For total lead more than 1 km upto 2 km			Unit:	3.4	cum
SI No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.2100	437.69	91.91
	Fuel charges	Hour	0.2100	506.34	106.33
2	Crew charges	Hour	0.2100	273.98	57.54
			Total Rs:		255.78
	Total for	3.4	cum	Rs:	255.78
	Rate per cum				75.23

For total lead more than 2 km upto 3 km			Unit:	3.4	cum
SI No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.2800	437.69	122.55
	Fuel charges	Hour	0.2800	506.34	141.78
2	Crew charges	Hour	0.2800	273.98	76.71
			Total Rs:		341.04
	Total for	3.4	cum	Rs:	341.04
	Rate per cum				100.31

For total lead more than 3 km upto 4 km			Unit:	3.4	cum
SI No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.3400	437.69	148.81
	Fuel charges	Hour	0.3400	506.34	172.16
2	Crew charges	Hour	0.3400	273.98	93.15
			Total Rs:		414.12
	Total for	3.4	cum	Rs:	414.12
	Rate per cum				121.80

For total lead more than 4 km upto 5 km			Unit:	3.4	cum
SI No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.4000	437.69	175.08
	Fuel charges	Hour	0.4000	506.34	202.54
2	Crew charges	Hour	0.4000	273.98	109.59
			Total Rs:		487.21
	Total for	3.4	cum	Rs:	487.21
	Rate per cum				143.30

For lead beyond 5 km upto 30 km for every km			Unit:	3.4	cum
Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.0600	437.69	26.26
	Fuel charges	Hour	0.0600	506.34	30.38
2	Crew charges	Hour	0.0600	273.98	16.44
			Total Rs:		73.08
	Total for	3.4	cum	Rs:	73.08
	Rate per cum				21.49

For lead beyond 30 km for every km			Unit:	3.4	cum
Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck hire charges	Hour	0.0500	437.69	21.88
	Fuel charges	Hour	0.0500	506.34	25.32
2	Crew charges	Hour	0.0500	273.98	13.70
			Total Rs:		60.90
	Total for	3.4	cum	Rs:	60.90
	Rate per cum				17.91

CATEGORY : water

For total lead upto 1 km			Unit:	8000	litres
Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker hire charges	Hour	0.1500	448.93	67.34
	Fuel charges	Hour	0.1500	506.34	75.95
2	Crew charges	Hour	0.1500	273.98	41.10
			Total Rs:		184.39
	Total for	8000	litres	Rs:	184.39
	Rate per 1000 litres				23.05

For total lead more than 1 km upto 2 km			Unit:	8000	litres
Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker hire charges	Hour	0.2100	448.93	94.28
	Fuel charges	Hour	0.2100	506.34	106.33
2	Crew charges	Hour	0.2100	273.98	57.54
			Total Rs:		258.15
	Total for	8000	litres	Rs:	258.15
	Rate per 1000 litres				32.27

For total lead more than 2 km upto 3 km			Unit:	8000	litres
Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker hire charges	Hour	0.2800	448.93	125.70
	Fuel charges	Hour	0.2800	506.34	141.78
2	Crew charges	Hour	0.2800	273.98	76.71
			Total Rs:		344.19
	Total for	8000	litres	Rs:	344.19
	Rate per 1000 litres				43.02

For total lead more than 3 km upto 4 km			Unit:	8000	litres
Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker hire charges	Hour	0.3400	448.93	152.64
	Fuel charges	Hour	0.3400	506.34	172.16
2	Crew charges	Hour	0.3400	273.98	93.15
			Total Rs:		417.95
	Total for	8000	litres	Rs:	417.95
	Rate per 1000 litres				52.24

For total lead more than 4 km upto 5 km			Unit:	8000	litres
Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker hire charges	Hour	0.4000	448.93	179.57
	Fuel charges	Hour	0.4000	506.34	202.54
2	Crew charges	Hour	0.4000	273.98	109.59
			Total Rs:		491.70
	Total for	8000	litres	Rs:	491.70
	Rate per 1000 litres				61.46

For lead beyond 5 km upto 30 km for every km			Unit:	8000	litres
Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker hire charges	Hour	0.0600	448.93	26.94
	Fuel charges	Hour	0.0600	506.34	30.38
2	Crew charges	Hour	0.0600	273.98	16.44
			Total Rs:		73.76
	Total for	8000	litres	Rs:	73.76
	Rate per 1000 litres				9.22

For lead beyond 30 km for every km

Unit: 8000

litres

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Water tanker hire charges	Hour	0.0500	448.93	22.45
	Fuel charges	Hour	0.0500	506.34	25.32
2	Crew charges	Hour	0.0500	273.98	13.70
			Total Rs:		61.47
	Total for	8000	litres	Rs:	61.47
	Rate per 1000 litres				7.68

CATEGORY : Bricks (as adopted by R&B(Buildings))

For total lead upto 1 km

Unit: 3000

bricks

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck 10 T charges	Hour	0.1500	437.69	65.65
	Fuel charges	Hour	0.1500	506.34	75.95
2	Crew charges	Hour	0.1500	273.98	41.10
			Total Rs:		182.70
	Total for	3000	bricks	Rs:	182.70
	Rate per 1000 bricks				60.90

For total lead more than 1 km upto 2 km

Unit: 3000

bricks

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck 10 T charges	Hour	0.2100	437.69	91.91
	Fuel charges	Hour	0.2100	506.34	106.33
2	Crew charges	Hour	0.2100	273.98	57.54
			Total Rs:		255.78
	Total for	3000	bricks	Rs:	255.78
	Rate per 1000 bricks				85.26

For total lead more than 2 km upto 3 km

Unit: 3000

bricks

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck 10 T charges	Hour	0.2800	437.69	122.55
	Fuel charges	Hour	0.2800	506.34	141.78
2	Crew charges	Hour	0.2800	273.98	76.71
			Total Rs:		341.04
	Total for	3000	bricks	Rs:	341.04
	Rate per 1000 bricks				113.68

For total lead more than 3 km upto 4 km

Unit: 3000

bricks

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck 10 T charges	Hour	0.3400	437.69	148.81
	Fuel charges	Hour	0.3400	506.34	172.16
2	Crew charges	Hour	0.3400	273.98	93.15
			Total Rs:		414.12
	Total for	3000	bricks	Rs:	414.12
	Rate per 1000 bricks				138.04

For total lead more than 4 km upto 5 km

Unit: 3000

bricks

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck 10 T charges	Hour	0.4000	437.69	175.08
	Fuel charges	Hour	0.4000	506.34	202.54
2	Crew charges	Hour	0.4000	273.98	109.59
			Total Rs:		487.21
	Total for	3000	bricks	Rs:	487.21
	Rate per 1000 bricks				162.40

For lead beyond 5 km upto 30 km for every km

Unit: 3000

bricks

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck 10 T charges	Hour	0.0600	437.69	26.26
	Fuel charges	Hour	0.0600	506.34	30.38
2	Crew charges	Hour	0.0600	273.98	16.44
			Total Rs:		73.08
	Total for	3000	bricks	Rs:	73.08
	Rate per 1000 bricks				24.36

For lead beyond 30 km for every km

Unit: 3000

bricks

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	Truck 10 T charges	Hour	0.0500	437.69	21.88
	Fuel charges	Hour	0.0500	506.34	25.32
2	Crew charges	Hour	0.0500	273.98	13.70
			Total Rs:		60.90
	Total for	3000	bricks	Rs:	60.90
	Rate per 1000 litres				20.30

COM-DTL-LDLFT-3

C. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (idle hire charges of trucks are not added)

MORD -data					
1	Loading of Lime, Aggregate, Stone Boulder,	Unit	Quantity	Rate Rs.	Amount Rs.
a) Loading	Brick Aggregate, Kankar, Building Rubbish, Building Rubbish, Crushed Slag, Stone for Masonry Work by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	Labour				
	Head Mazdoor	day	0.0200	640.00	12.80
	Mazdoor	day	0.5000	595	297.50
		Total in Rs.			310.30
	Rate per cum =			Rs.	56.42

b) Unloadin 50% of the loading charges **28.21**

2	Loading of Earth, Sand, Moorum, Manure, Fly	Unit	Quantity	Rate Rs.	Amount Rs.
a) Loading	by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	Labour				
	Head Mazdoor	day	0.0100	640.00	6.40
	Mazdoor	day	0.2500	595.00	148.75
		Total in Rs.			155.15
	Rate per cum =			Rs.	28.21

b) Unloadin 50% of the loading charges **14.11**

3	Loading of Bricks by manual means	Unit	Quantity	Rate Rs.	Amount Rs.
a) Loading	including a lead upto 30 m				
	Unit = 1000 Nos.				
	Taking output = 2000 Nos				
	a) Labour				
	Head Mazdoor	day	0.0100	640.00	6.40
	Mazdoor	day	0.2500	595	148.75
	Cost for 2000 Nos. =				155.15
	Rate per cum =			Rs.	77.58

100% of loading charges

b) Unloadin i.e., Rs. **77.58**

4	Loading of Cement by manual means	Unit	Quantity	Rate Rs.	Amount Rs.
a) Loading	including a lead upto 30 m				
	Unit = 1 t				
	Taking output = 10 t				
	a) Labour				
	Head mazdoor	day	0.0600	640.00	38.40
	Mazdoor	day	1.5000	595	892.50
	Cost for 10 t =				930.90
	Rate per 1 tonne =			Rs.	93.09

b) Unloadin 100% of loading charges i.e **93.09**

5	Loading of Structural Steel, Steel Bars by man	Unit	Quantity	Rate Rs.	Amount Rs.
a) Loading	including a lead upto 30 m				
	Unit = 1 t				
	Taking output = 10 t				
	a) Labour				
	head Mazdoor	day	0.0700	640.00	44.8
	Mazdoor	day	1.8000	595.00	1071.00
	Cost for 10 t =				1115.80
	Rate per 1 tonne =			Rs.	111.58

100% of loading charges

b) Unloadin i.e., Rs. **111.58**

6	Loading of Bricks - 1000 Nos (Regular sizes - 225x140x70 mm) by manual means including	Unit	Quantity	Rate Rs.	Amount Rs.
a) Loading					
	Unit = 1000 Nos.				
	Taking output = 2000 Nos.				
	a) Labour				
	head Mazdoor	day	0.0100	640.00	6.4
	Mazdoor	day	0.2500	595.00	148.75
	Cost for 2000 Nos. =				155.15
	Rate per 1000 Nos. =			Rs.	77.58

100% of loading charges

b) Unloadin i.e., Rs. **77.58**

COM-DTL-LDLFT-4

D. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (including idle hire charges of trucks)

1	Loading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Building Rubbish, Crushed Slag, Stone for Mas	Unit	Quantity	Rate Rs.	Amount Rs.
a) Loading	Work by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	a) Labour				
	Head Mazdoor	day	0.0200	640.00	12.80
	Mazdoor	day	0.5000	595.00	297.50
	b) Machinery				
	Truck 10t	hour	0.5000	1218.01	609.01
	Cost for 5.5 cum =				919.31
	Rate per cum =			Rs.	167.15

b) Unloadin 50% of the loading charges i.e., 83.58

2	Loading of Earth, Sand, Moorum, Manure, Fly	Unit	Quantity	Rate Rs.	Amount Rs.
a) Loading	by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	Labour				
	Head Mazdoor	day	0.0100	640.00	6.40
	Mazdoor	day	0.2500	595.00	148.75
	b) Machinery				
	Truck 10t	hour	0.5000	1218.01	609.01
	Cost for 5.5 cum =				764.16
	Rate per cum =			Rs.	138.94

b) Unloadin	Unloading of Earth, Sand, Moorum, Manure, F	Unit	Quantity	Rate Rs.	Amount Rs.
	by manual means including a lead upto 30 m				
	Unit = cum				
	Taking output = 5.5 cum				
	a) Labour				
	Mate	day	0.00500	640.00	3.20
	Mazdoor(unskilled)	day	0.12500	595	74.38
	b) Machinery				
	Truck 10t	hour	0.16600	1218.01	202.19
	Cost for 5.5 cum =				279.77
	Rate per cum =			Rs.	50.87

3	Loading of Bricks by manual means	Unit	Quantity	Rate Rs.	Total
a) Loading	including a lead upto 30 m				
	Unit = 1000 Nos.				
	Taking output = 2000 Nos				
	a) Labour				
	Mate	day	0.0100	640.00	6.40
	Mazdoor(unskilled)	day	0.2500	595.00	148.75
	b) Machinery				
	Truck 10t	hour	0.3300	1218.01	401.94
	Cost for 2000 Nos. =				557.09
	Rate per 1000 bricks =			Rs.	278.55

b) Unloadin 100% of loading charges i.e 278.55

4	Loading of Cement by manual means	Unit	Quantity	Rate Rs.	Total
a) Loading	including a lead upto 30 m				
	Unit = 1 t				
	Taking output = 10 t				
	a) Labour				
	Mate	day	0.0600	640.00	38.40
	Mazdoor(unskilled)	day	1.5000	595	892.50
	b) Machinery				
	Truck 10t	hour	1.0000	1218.01	1218.01
	Cost for 10 t =				2148.91
	Rate per 1 tonne =			Rs.	214.89

b) Unloadin 100% of loading charges i.e 214.89

5	Loading of Structural Steel, Steel Bars by	Unit	Quantity	Rate Rs.	Total
a) Loading	manual means including a lead upto 30 m				
	Unit = 1 t				
	Taking output = 10 t				
	a) Labour				
	Mate	day	0.0700	640.00	44.80
	Mazdoor(unsilled)	day	1.8000	595	1071.00
	b) Machinery				
	Truck 10t	hour	1.0000	1218.01	1218.01
	Cost for 10 t =				2333.81
	Rate per 1 tonne =			Rs.	233.38

b) Unloadin 100% of loading charges i.e 233.38

COM-DTL-LDLFT-5

E. LOADING AND UNLOADING CHARGES BY MECHANICAL MEANS (including idle hire charges of trucks)

COM-DTL-LDLFT-5-A

1	Loading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry work by	Unit	Quantity	Rate Rs.	Total
a) Loading	mechanical means including a lead upto 30 m				
	Placing tipper at loading point, loading with front end loader excluding time for haulage and return trip.				
	Unit = cum				
	Taking output = 5.5 cum				
	Time required for				
	i) Positioning of tipper at loading point	Min	1		
	ii) Loading by front end loader 1 cum bucket ca	Min	7.33		
	@ 45 / 25 cum per hour				
	iii) Manoeuvring, reversing, dumping and turn	Min	-		
	for return				
	iv) Waiting time, unforeseen contingencies, etc	Min	2		
	Total	Min	10.33		
	a) Machinery				
	Tipper 10 t capacity	hour	0.1722	1266.61	218.07
	Front end-loader 1 cum bucket capacity @ 45	hour	0.1222	3594.04	439.07
	per hour				
	Cost for 5.5 cum =				657.14
	Rate per cum = (a+b)/5.5			Rs.	119.48

b) Unloadin see below. COM-LDLFT-5-B

COM-DTL-LDLFT-5-B

2	Loading of Earth, sand, Moorum, Manure, Flyash, by	Unit	Quantity	Rate Rs.	Total
a) Loading	mechanical means including a lead upto 30 m				
	Placing tipper at loading point, loading with front end loader excluding time for haulage and return trip.				
	Unit = cum				
	Taking output = 5.5 cum				
	Time required for				
	i) Positioning of tipper at loading point	Min	1		
	ii) Loading by front end loader 1 cum bucket ca	Min	3.3		
	@ 45 / 25 cum per hour				
	iii) Waiting time, unforeseen contingencies, etc	Min	2		
	Total	Min	6.3		
	a) Machinery				
	Tipper 10 t capacity	hour	0.1050	1266.61	132.99
	Front end-loader 1 cum bucket capacity @ 45	hour	0.0550	3594.04	197.67
	per hour				
	Cost for 5.5 cum =				330.66
	Rate per cum = (a+b)/5.5			Rs.	60.12

b) Unloadin	Unloading of Earth, sand, Moorum, Manure, Flyash, lime, Aggregate, Stone boulder, Brick aggregate, Kankar, Building rubbish, Manure, Crushed Slag, Flyash, Stone for Masonry work by	Unit	Quantity	Rate Rs.	Total
	mechanical means including a lead upto 30 m				
	Placing tipper at unloading point, excluding time for haulage and return trip.				
	Taking output = 5.5 cum				
	Time required for				
	i) Positioning of tipper at loading point	Min	1		
	ii) Loading by front end loader 1 cum bucket ca	Min	2		
	@ 45 / 25 cum per hour				
	iii) Waiting time, unforeseen contingencies, etc	Min	2		
	Total		5		
	a) Machinery				
	Tipper 10 t capacity	hour	0.0833	1266.61	105.55
	Cost for 5.5 cum =				105.55
	Rate per cum = (a+b)/5.5				19.19

COM-DTL-LDLFT-6

F. LIFT CHARGES FOR MATERIALS BY HEAD LOAD

FOR CATEGORY : Earth / Sand / Gravel / Murrum / Lime / Surki / Coarse aggregate / Rubble stone / Size stone / Cut stone

Lift : Upto 3.00 m

This is the initial lift and forms integral part of the activities in the basic rate of work item.
Lift charges are admissible only lifting effort beyond initial lift specified in the work item.

Lift : ADDITIONAL LIFT CHARGES FOR each 1 METER LIFT BEYOND 3 M INITIAL LIFT

For additional lift of 1m beyond initial lift of 3 m

one meter lift is taken equivalent to 6 meters lead

average speed of conveyance by head load 60 m/minute

Round trip cycle time for 1.00 m considering 50 min/ hr working

1 x6x 60 / 50 / 60) 0.12 min

No. of trips per day for lift 1.0 m above 3 m (8 x 60 / 0.12)

4000

Quantity of material by head load

0.015

cum

Quantity of material by head load per day (4000x 0.015)

60

cum

Deploy 1 mazdoor for every additional lift of 1.0 m beyond initial lift.

Lift : Upto 3.00 m for materials under this Category Unit: 60 cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	2	3	4	5	6
	Mazdoor	Day	1.0000	595.00	595.00
		Total Rs: for 60 cum			595.00
	Rate per cum				9.92

FOR CATEGORY: Cement bag / Reinforcement steel / Structural steel sections**Lift : Upto 3.00 m**

This is the initial lift and forms integral part of the activities in the basic rate of work item.

Lift charges are admissible only lifting effort beyond initial lift specified in the work item.

Lift : ADDITIONAL LIFT CHARGES FOR each 1 METER LIFT BEYOND 3 M INITIAL LIFT

For additional lift of 1m beyond initial lift of 3 m

one meter lift is taken equivalent to 6 meters lead

average speed of conveyance by head load 25 m/minute

Round trip cycle time for 1.00 m considering 50 min/ hr working

1 x6x 60 / 50 / 25) 0.29 min

No. of trips per day for additional lift 1.0 m above 3 m (8 x 60 / 0.29)

1655

Quantity of material by head load

50

kgs

Quantity of material by head load per day (1655x50x 0.015)

83

tons

Deploy 1 mazdoor for every additional lift of 1.5 m beyond initial lift.or2/3 mazdoor

Lift : Upto 3.00 m for materials under this Category Unit: 83 TONS

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	2	3	4	5	6
	Mazdoor	Day	1.0000	595.00	595.00
		Total Rs: for 83 Tonnes			595.00
	Rate per tonne				7.17

FOR CATEGORY : PCC slab / Shahabad stone slab / CC block / Laterite stone / BS slab / Wood**Lift : Upto 3.00 m**

This is the initial lift and forms integral part of the activities in the basic rate of work item.

Lift charges are admissible only lifting effort beyond initial lift specified in the work item.

Lift : ADDITIONAL LIFT CHARGES FOR EACH 1 METER LIFT BEYOND 3 M INITIAL LIFT

For additional lift of 1m beyond initial lift of 3 m

one meter lift is taken equivalent to 6 meters lead

average speed of conveyance by head load 40 m/minute

Round trip cycle time for 1.00 m considering 50 min/ hr working

1 x6x 60 / 50 / 40) 0.18 min

No. of trips per day for lift 1.0 m (8 x 60 / 0.18)

2667

Quantity of material by head load

0.017

cum

Quantity of material by head load per day (1667x 0.018)

45

cum

Deploy 1 mazdoor for every additional lift of 1.5 m beyond initial lift.or2/3 mazdoor

Lift : Upto 3.00 m for materials under Category Unit: 45 cum

Sl No.	Description	Unit	Quantity	Rate in Rs.	Amount in Rs.
1	2	3	4	5	6
	Mazdoor	Day	1.0000	595.00	595.00
		Total Rs: for 45 cum			595.00
	Rate per cum				13.22

HIRE CHARGES OF MACHINERY FOR THE YEAR : 2024-25

SI No	Description of machinery	Unit	Hire charge in Rs	Fuel charge in Rs	Crew Charge in Rs.	Total in Rs
1	2	3	4	5	6	7
1	Agitator car / Transit mixer 2 cum	Hour	794.00	1473.48	443.04	2710.52
2	Air compressor 5 cmm (electric)	Hour	105.73	285.52	260.33	651.58
3	Air compressor 7 cmm (diesel)	Hour	237.70	1205.58	333.22	1776.50
4	Air compressor 7 cmm (electric)	Hour	132.59	380.69	260.33	773.61
5	Air compressor 8.5 cmm (diesel)	Hour	280.01	1506.96	333.22	2120.19
6	Air compressor 8.5 cmm (electric)	Hour	172.20	475.86	260.33	908.39
7	Air compressor 15 cmm (electric)	Hour	136.20	1057.45	277.68	1471.33
8	Angle Dozer 90 hp	Hour	1651.08	1030.76	369.20	3051.04
9	Batching plant 0.5 cum(6 cum/hr)	Hour	112.00	126.90	535.28	774.18
10	Batching plant 2 x 1.00 cum(15 cum/hr)	Hour	396.19	380.69	535.28	1312.16
11	Batching plant 2 x 1.50 cum(50 cum/hr)	Hour	606.69	465.28	535.28	1607.25
12	Bending machine 3000 x 12 mm	Hour	43.53	126.90	208.26	378.69
13	Clamp shell and hoisting ropes	Hour	6.06	0.00	0.00	6.06
14	Concrete bucket 1.5 cum	Hour	17.47	0.00	0.00	17.47
15	Concrete hand mixer 45 / 30 ltr	Hour	5.69	0.00	0.00	5.69
16	Concrete mixer 300 / 200 (diesel)	Hour	54.70	133.95	347.10	535.75
17	Concrete mixer 300 / 200 ltr (electric)	Hour	53.42	42.30	347.10	442.82
18	Concrete mixer 600 / 400 (diesel)	Hour	93.08	267.90	347.10	708.08
19	Concrete mixer 600 / 400 ltr (electric)	Hour	91.19	84.60	347.10	522.89
20	Concrete paver 100 sqm / hr	Hour	351.40	0.00	666.43	1017.83
21	Convey mucker	Hour	819.19	294.40	277.68	1391.27
22	Core drilling machine	Hour	318.25	401.86	443.04	1163.15
23	Diesel generating set 30 KVA	Hour	67.95	1071.63	208.26	1347.84
24	Diesel generating set 50 KVA	Hour	84.89	1607.43	208.26	1900.58
25	Diesel Loco 45 hp	Hour	380.91	904.18	260.33	1545.42
26	Dewatering pump 5 hp (diesel)	Hour	10.34	133.95	173.47	317.76
27	Dewatering pump 5 hp (electric)	Hour	3.15	42.30	130.08	175.53
28	Dewatering pump 10 hp (diesel)	Hour	16.25	267.90	173.47	457.62
29	Dewatering pump 10 hp (electric)	Hour	7.03	84.60	130.08	221.71
30	Dewatering pump 20 hp (diesel)	Hour	51.30	535.81	173.47	760.58
31	Dewatering pump 20 hp (electric)	Hour	13.18	169.19	130.08	312.45
32	Drifter	Hour	321.65	0.00	553.80	875.45
33	Drilling jumbo	Hour	389.85	72.34	277.68	739.87
34	Dumper 4.5 cum	Hour	628.34	675.13	354.43	1657.90
35	Geophysical Electric resistivity meter	Hour	108.70	0.00	0.00	108.70
36	Grouting pump	Hour	23.95	42.30	416.52	482.77
37	Guniting / sand blast equipment	Hour	123.76	0.00	347.10	470.86
38	Ice plant & accessories 30 t / day	Hour	185.82	1205.50	208.26	1599.58
39	Jack hammer	Hour	19.11	0.00	520.65	539.76
40	Needle vibrator 40 mm (petrol)	Hour	8.39	30.14	249.86	288.39
41	Needle vibrator 40 mm (electric)	Hour	8.01	8.46	249.86	266.33
42	Needle vibrator 60 mm (petrol)	Hour	10.26	45.20	249.86	305.32
43	Needle vibrator 60 mm (electric)	Hour	8.33	12.68	249.86	270.87
44	Planing machine 4 m stroke	Hour	132.55	126.90	333.22	592.67
45	Plate shearing machine upto 12 mm	Hour	47.29	169.19	221.52	438.00
46	Pneumatic placer 0.5 cum	Hour	168.96	0.00	135.53	304.49
47	Pneumatic tamper	Hour	20.15	0.00	416.52	436.67
48	Pug cutting machine	Hour	6.82	4.22	0.00	11.04
49	Pusher leg	Hour	14.83	0.00	0.00	14.83
50	Road roller diesel 10 t	Hour	192.67	1205.58	339.46	1737.71
51	Shovel 0.50 cum 75 hp	Hour	1048.36	803.71	369.20	2221.27
52	Shovel 0.85 cum 110 hp	Hour	1751.36	1473.48	369.20	3594.04

HIRE CHARGES OF MACHINERY FOR THE YEAR : 2024-25

SI No	Description of machinery	Unit	Hire charge in Rs	Fuel charge in Rs	Crew Charge in Rs.	Total in Rs
1	2	3	4	5	6	7
53	Stationery derrick crane	Hour	87.15	0.00	0.00	87.15
54	Tipper 5 cum	Hour	483.37	506.34	276.90	1266.61
55	Tipping tub 1.5 cum	Hour	72.79	0.00	0.00	72.79
56	Tower crane 5 tonne	Hour	865.81	219.95	295.36	1381.12
57	Transformer 250 KVA	Hour	5737.38	0.00	0.00	5737.38
58	Truck 10 t	Hour	437.69	506.34	273.98	1218.01
59	Truck mounted derrick crane 5 t	Hour	552.23	506.34	273.98	1332.55
60	Upright drilling machine/Grinder	Hour	23.83	42.30	304.20	370.33
61	Ventilation fan 20 hp	Hour	12.70	169.19	44.87	226.76
62	Vibratory pad foot roller 8 t	Hour	1330.63	1741.39	416.52	3488.54
63	Wagon drill	Hour	199.88	0.00	443.04	642.92
64	Water tanker 8000 ltr	Hour	448.93	506.34	273.98	1229.25
65	Welding set	Hour	17.29	101.52	0.00	118.81
66	Winch 35 hp (electric)	Hour	139.99	207.26	416.52	763.77
67	Hydraulic Truck Crane 30T	Hour	3264.25	1987.99	833.66	6085.90
68	Hydraulic Truck Crane 16T	Hour	2307.88	1758.13	833.66	4899.67
69	Heavy Duty Airless Spray Painting Equipment	Hour	123.07	0.00	0.00	123.07
70	Concrete Placer Pump 25 Cum/Hr	Hour	943.97	507.58	260.33	1711.88
71	Tractor with 2 T roller	Hour	500.00	0.00	0.00	500.00