

Letter of Tender – Financial Part

INSTRUCTIONS TO TENDERERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Tenderer must prepare this Letter of Tender on stationery with its letterhead clearly showing the Tenderer's complete name and business address.

Note: All italicized text is to help Tenderers in preparing this form.

Date of this Tender submission: *[insert date (as day, month and year) of Tender submission]*

Tender No.: *[insert tender reference number]*

Alternative No.: *[insert reference number if this is a Tender for an alternative]*

To: *[insert complete name of Employer]*

We, the undersigned, hereby submit the second part of our Tender, the Tender Price and Price Schedule. This accompanies the Letter of Tender – Technical Part.

In submitting our Tender, we declare that:

- (a) **Tender Validity Period:** Our Tender shall be valid for the period specified in TDS 18.1 (as amended, if applicable) from the date fixed for the Tender submission deadline specified in TDS 22.1 (as amended, if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (b) ***Tender Price:** The total price of our Tender including Provisional Sum is: *[insert the total price of the Tender in words and figures in INR]*;
- (c) **Commissions, Gratuities, Fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Tendering process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]*

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate “none.”)

Name of the Tenderer: ***[insert complete name of the Tenderer]*

Name of the person duly authorized to sign the Tender on behalf of the Tenderer: ****[insert complete name of person duly authorized to sign the Tender]*

Title of the person signing the Tender: *[insert complete title of the person signing the Tender]*

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* **day of** *[insert month]*, *[insert year]*

* The total price of Tender including Provisional Sums quoted in this Letter of Tender-Financial Part shall be same as given in Worksheet BOQ3 (Price Schedule –Summary Sheet) of MS-Excel File which includes cost of Schedule ‘A’ plus Schedule ‘B’ plus Schedule ‘C’ plus Provisional Sum.

**In the case of the Tender submitted by Joint Venture/Consortium specify the name of the Joint Venture/Consortium as Tenderer

*** Person signing the Tender shall have the Power of Attorney given by the Tenderer. The power of attorney shall be attached with the Letter of Tender-Technical Part.

Appendix A to Financial Part: Schedule of Adjustment Data

1. Price adjustment

1.1 The amounts payable to the Contractor for Works shall be adjusted in accordance with the provisions of this Clause 1.0, Sub-Clause 13.7 of GCC and Sub-Clause 13.7, Specific Provision, Part B, Section IX-PCC.

1.2 The Contract Price shall be adjusted for increase or decrease in rates and prices of labour, materials, fuel and lubricants, equipment, Machinery, Plant and other Materials or inputs in accordance with the principles, procedures and formulae specified below:

- a) Base month for the purpose of Price Adjustment shall be the month in which the Tender is opened for Civil & BLT Works and General Electrical Services Works. The 1st Quarter will start from Base month;
- b) For Schedule-A, Price adjustment shall be applied on completion of the specified stage of the respective item of work.
- c) Adjustment for each item of work/stage shall be made separately;
- d) The following expressions and meanings are assigned to the value of the work done for Civil works:

EW = Value of work done for the completion of a stage under the Cost Centre 'CE' of Price Schedule 'A';

BR = Value of work done for the completion of a stage under the Cost Centre 'CB' of Price Schedule 'A';

TUNL = Value of work done for the completion of a stage under the Cost Centre 'CTU' of Price Schedule 'A';

BLT = Value of work done for the completion of a stage under the under the Cost Centre 'CBT' of Price Schedule 'A';

RW = Value of work done for the completion of a stage under the Cost Centre 'RW' of Price Schedule 'A';

SCHB = Value of work done under Price Schedule 'B';

MISC = Value of work done under Price Schedule 'C';

- e) Price adjustment for change in costs of civil works shall be paid in accordance with the following formula:

$$i) \quad VEW = 0.85 \text{ EW} \times [\text{PLB} \times (\text{LBi} - \text{LBo})/\text{LBo} + \text{PF} \times (\text{Fi} - \text{Fo})/\text{Fo} + \text{PMACH} \times (\text{MACHi} - \text{MACHo})/\text{MACHo} + \text{POTH} \times (\text{OTHi} - \text{OTHo})/\text{OTHo}];$$

$$ii) \quad VBR = 0.85 \text{ BR} \times [\text{PLB} \times (\text{LBi} - \text{LBo})/\text{LBo} + \text{PC} \times (\text{Ci} - \text{Co})/\text{Co} + \text{PS} \times (\text{Si} - \text{So})/\text{So} + \text{PF} \times (\text{Fi} - \text{Fo})/\text{Fo} + \text{PMACH} \times (\text{MACHi} - \text{MACHo})/\text{MACHo} + \text{POTH} \times (\text{OTHi} - \text{OTHo})/\text{OTHo}];$$

- iii) $VTUNL = 0.85 TUNL \times [PLB \times (LBi - LBo)/LBo + PC \times (Ci - Co)/Co + PS \times (Si - So)/So + PF \times (Fi - Fo)/Fo + PMACH \times (MACHI - MACHo)/MACHo + POTH \times (OTHi - OTHo)/OTHo + PXL P \times (XLPi - XLPo)/XLPo]$;
- iv) $VBLT = 0.85 BLT \times [PLB \times (LBi - LBo)/LBo + PC \times (Ci - Co)/Co + PS \times (Si - So)/So + PF \times (Fi - Fo)/Fo + PMACH \times (MACHI - MACHo)/MACHo + POTH \times (OTHi - OTHo)/OTHo]$;
- v) $VRW = 0.85 RW \times [PLB \times (LBi - LBo)/LBo + PC \times (Ci - Co)/Co + PS \times (Si - So)/So + PF \times (Fi - Fo)/Fo + PMACH \times (MACHI - MACHo)/MACHo + POTH \times (OTHi - OTHo)/OTHo]$;
- i) $VSCHB = 0.85 RW \times [PLB \times (LBi - LBo)/LBo + PC \times (Ci - Co)/Co + PS \times (Si - So)/So + PF \times (Fi - Fo)/Fo + PMACH \times (MACHI - MACHo)/MACHo + POTH \times (OTHi - OTHo)/OTHo]$;
- ii) $VMISC = 0.85 MISC \times [PLB \times (LBi - LBo)/LBo + PF \times (Fi - Fo)/Fo + PMACH \times (MACHI - MACHo)/MACHo + POTH \times (OTHi - OTHo)/OTHo]$;

Where

VEW = Increase or decrease in the cost under the Cost Centre 'CE' of Price Schedule 'A' during the period under consideration due to changes in the rates for relevant components as specified in sub-paragraph (f);

VBR = Increase or decrease in the cost of Cost Centre 'CB' of Price Schedule 'A' during the period under consideration due to changes in the rates for relevant components as specified in sub-paragraph (f);

VTUNL = Increase or decrease in the cost under the Cost Centre 'CTU' of Price Schedule 'A' during the period under consideration due to changes in the rates for relevant components as specified in sub-paragraph (f);

VBLT = Increase or decrease in the cost under the Cost Centre 'CBLT' of Price Schedule 'A' during the period under consideration due to changes in the rates for relevant components as specified in sub-paragraph (f);

VRW = Increase or decrease in the cost under the Cost Centre 'RW' of Price Schedule 'A' during the period under consideration due to changes in the rates for relevant components as specified in sub-paragraph (f);

VSCHB = Increase or decrease in the cost of work done under Price Schedule 'B' during the period under consideration due to changes in the rates for relevant components as specified in sub-paragraph (f);

VMISC = Increase or decrease in the cost of work done under Price Schedule 'C' during the period under consideration due to changes in the rates for relevant components as specified in sub-paragraph (f);

PC, PF, PLB, PMACH, POTH, PS and PXLPL are the percentages of cement, fuel and lubricants, labour, Plant Machinery and tools, other materials, steel/ steel components (including structural steel) and explosives, respectively for the relevant item as specified in sub-paragraph (f);

Co = The wholesale price index as published by the Ministry of Commerce and Industry, Government of India (hereinafter called “WPI”) for sub-group Cement, Lime & Plaster for the Base Month;

Ci = The WPI for sub-group Cement, Lime & Plaster for the average price index of the 3 months of the quarter under consideration;

Fo = The wholesale price index as published by the Ministry of Commerce and Industry, Government of India (hereinafter called “WPI”) for group Fuel & Power for the Base Month;

Fi = The WPI for group Fuel & Power for the average price index of the 3 months of the quarter under consideration

LBo = The consumer price index for industrial workers – All India, published by Labour Bureau, Ministry of Labour, Government of India, (hereinafter called “CPI”) for the Base Month;

LBi = The CPI for industrial workers – All India for the average price index of the 3 months of the quarter under consideration;

MACHo = The wholesale price index as published by the Ministry of Commerce and Industry, Government of India (hereinafter called “WPI”) for category- k “Manufacturing of Machinery for Mining, quarrying and construction’ under (R) Manufacturing of Machinery and Equipment for the Base Month;

MACHi = The WPI for category- k “Manufacturing of Machinery for Mining, quarrying and construction’ under (R) Manufacturing of Machinery and Equipment for the average price index of the 3 months of the quarter under consideration;

OTHo = The wholesale price index as published by the Ministry of Commerce and Industry, Government of India (hereinafter called “WPI”) for all commodities for the Base Month;

OTHi = The WPI for all commodities for the average price index of the 3 months of the quarter under consideration;

So = Average Rate of RINL for Rebar 8 mm (coil) as published for Ludhiana Branch on their website for the Base Month;

Si = Average rate of RINL for Rebar 8 mm (coil) as published for Ludhiana Branch on their website for the 3 months of the quarter under consideration;

If only one rate is published for the 3 months of the quarter under consideration, the published rate for that quarter shall be considered for the quarter under consideration.

If no rate is published by RINL for Rebar 8mm (coil) for the 3 months of the quarter under consideration, the value of Si and So will be taken as under:

“So”: Wholesale Price Index for ‘MS Bright Bars’ individual commodity of group item (d) Mild Steel- Long products under (N) MANUFACTURE OF BASIC METALS, published by Office of Economic Adviser, Government of India, Ministry of Commerce & Industry Department of Industrial Policy & Promotion (DIIP) for the Base Month;

“Si”: Average Wholesale Price Index for ‘MS Bright Bars’ individual commodity of group item (d) Mild Steel- Long products under (N) MANUFACTURE OF BASIC METAL, published by Office of Economic Adviser, Government of India, Ministry of Commerce & Industry Department of Industrial Policy & Promotion (DIIP) for the 3 months of the quarter under consideration;

XLPO = The wholesale price index as published by the Ministry of Commerce and Industry, Government of India (hereinafter called “WPI”) for explosives for the Base Month; and

XLPI = The WPI for explosives for the average price index of the 3 months of the quarter under consideration.

- f) The following percentages shall govern the price adjustment of the Contract Price for costs of civil works:

Component	EW (Cost Centre CE of Price Schedule 'A')	BR & RW (Cost Centre CB and Cost Centre CRW of Price Schedule 'A')	TUNL (Cost Centre CTU of Price Schedule 'A')	BLT (Cost Centre CBT of Price Schedule 'A')	SCHB (Price Schedule 'B')	MISC (Price Schedule 'C')
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cement (PC)	-	20%	20%	20%	20%	-
Fuel and lubricants (PF)	30%	20%	15%	20%	20%	30%
Labour (PLB)	20%	10%	10%	10%	10%	20%
Machinery and Plants (PMACH)	40%	15%	10%	15%	15%	40%

Component	EW (Cost Centre CE of Price Schedule 'A')	BR & RW (Cost Centre CB and Cost Centre CRW of Price Schedule 'A')	TUNL (Cost Centre CTU of Price Schedule 'A')	BLT (Cost Centre CBT of Price Schedule 'A')	SCHB (Price Schedule 'B')	MISC (Price Schedule 'C')
Other Materials (POTH)	10%	10%	10%	10%	10%	10%
Steel(PS)	-	25%	30%	25%	25%	-
Explosives (PXLP)	-	-	05%	-	-	-
Total	100%	100%	100%		100%	100%

g) The following expressions and meanings are assigned to the value of the work done for Various General Electrical Services works:

- i) **ELEGWK** = Value of work done for the completion of a stage under Cost Center 'E1- General Electrical Services works of Price Schedule 'A';
- ii) **INVELECTRICAL** = Value of work done for the completion of a stage under Cost Center 'E2'- Inventory/Spare Items' of Price Schedule 'A';

Note: - No price adjustment shall be paid against Sub-Cost Center- E3. (Maintenance and Manning of Electrical system).

h) Price adjustment for changes in cost for various General Electrical Services works shall be paid in accordance with the following formula:

- i)
$$\mathbf{VELEGWK} = 0.85 \mathbf{ELEGWK} \times [\mathbf{PLB} \times (\mathbf{LBi} - \mathbf{LBo})/\mathbf{LBo} + \mathbf{POTH} \times (\mathbf{OTHi} - \mathbf{OTHo})/\mathbf{OTHo}]$$
- ii)
$$\mathbf{VINVELECTRICAL} = 0.85 \mathbf{INVELECTRICAL} \times [\mathbf{POTH} \times (\mathbf{OTHi} - \mathbf{OTHo})/\mathbf{OTHo}];$$

Where: -

VELEGWK = Increase or decrease in the cost under cost center 'E1' of Price Schedule 'A' of General Electrical Services works with complete accessories during the period under consideration due to changes in the rates for relevant components as specified in sub-paragraph (i);

VINVELECTRICAL = Increase or decrease in the cost under cost Centre ‘E2’ of Price Schedule ‘A’ of Inventory/Spare item during the period under consideration due to changes in the rates for relevant components as specified in sub-paragraph (i);

PLB and POTH and PELEX are the percentages of Labor and, All Other Commodities respectively for the relevant item as specified in sub-paragraph (i);

LBo = The consumer price index for industrial workers – All India, published by Labour Bureau, Ministry of Labour, Government of India, (hereinafter called “CPI”) for the Base month;

LBi = The CPI for industrial workers – All India for the average price index of the 3 months of the quarter under consideration

OTHo = The wholesale price index as published by the Ministry of Commerce and Industry, Government of India (hereinafter called “WPI”) for “All commodities” for the Base month;

OTHi = The WPI for all commodities for the average price index of the 3 months of the quarter under consideration;

i) The following percentages shall govern the price adjustment of the Contract Price for Various General Electrical Services works:

(i) For Electrical works, & Inventory /Spare Item:

Component	General Electrical Services Works except commissioning for the Division (E1 – E1.1, E1.2, & E1.3)	Inventory/Spare Item (E2)	Commissioning of Electrical system with complete accessories (E1.4)
Labour (PLB)	20%	-	100%
Electronics (PELEX)	-	-	-
PVC Insulated Cable (PIC)	-	-	-
Fibre Cable (POFC)	-	-	-

All other commodities (POTH)	80 %	100.00%	-
Total	100.00%	100.00%	100.00 %

Table A. Foreign Currency (FC)

Not applicable as Tenderer's are required to quote rates and prices only in INR.

Table B. Summary of Payment Currencies

For [insert name of Works]

Name of Payment Currency	A	B	C	D
	Amount of Currency	Rate of Exchange (local currency per unit of foreign)	Local Currency Equivalent $C = A \times B$	Percentage of Net Tender Price (NTP) $\frac{100 \times C}{NTP}$
For Schedule 'A'				
Local currency (INR)		1.00		
USD (\$)				
EUR (€)				
JPY (¥)				
Schedule 'B'		1.00		
Schedule 'C'		1.00		
Net Tender Price				100.00
Provisional Sums Expressed in Local Currency (INR) in million	100,000,000.00	1.00	100,000,000.00	Not Applicable
TOTAL TENDER PRICE (including Provisional Sum)				

Note: The Tenderer is required to propose and submit the schedules given in tables above as part of the Tender. The rates of exchange shall be the reference rate twenty-eight (28) days prior to the deadline for submission of Tenders published by the Reserve Bank of India (RBI) on its website <https://www.rbi.org.in>. In case the exchange rate of particular currency on given date is not available on RBI web site, it will be as per the web site <https://www.fbil.org.in> of Financial Benchmark India Private Limited (FBIL).

Appendix B to Financial Part: Price Schedules

1 Preamble

- 1.1. The Price Schedules shall be read in conjunction with the Instructions to Tenderers, the General Conditions, the Particular Conditions and the Employer's Requirements (General Specifications, Design Requirements Criteria, Technical Specifications, Drawings) and the Addenda (if any).
- 1.2. **Schedule 'A'** comprises scope of work to be executed under lump sum contract as detailed in Part 2- Employers' Requirements of Tender Document. The Tenderer has to quote a single lump sum amount against Schedule 'A'. Payment to the Contractor will be made in accordance with payment stages/Milestones defined for each Cost Centre detailed in Clause 5.0 and Clause 6.0 below unless otherwise specified in the Contract.
- 1.3. **Schedule 'B'** comprises of percentage rate for "Other civil works". The work has to be carried out as per the description of items given in Schedule 'B' and directions of the Engineer. The Tenderer has to quote the percentage Excess (+) or Less (-) over the basic amount given in the Schedule 'B'. The payment against this Schedule 'B' will be made on the basis of quantities executed, measured and certified. Under this Schedule, the Contractor is required to carry out other civil works, which are not covered in Schedule 'A', as per site requirements and as per the direction of the Engineer.
- 1.4. **Schedule 'C'** comprises "Item rates for miscellaneous works". Under this Schedule, the Contractor has to undertake items or works not covered in Schedule 'A' or Schedule 'B'. Execution of items under this Schedule shall be carried out only after specific instructions of the Engineer. This Schedule consists of items for Civil works. The work has to be carried out as per Schedule of items given in this Schedule 'C'. This Schedule contains only Rate and Unit of items of the works. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices quoted in the Price Schedules. The Tenderer has to quote the percentage (%) Excess (+) or Less (-) over the basic amount given in Schedule 'C' for items to be executed against this head.
- 1.5. The Schedules may not generally give a full description of the works to be performed and the plant or equipment to be supplied under each item. Tenderers shall be deemed to have read the Employer's Requirements and the other sections of the Tender Documents and reviewed the Drawings to ascertain the full scope of the requirements included in each item prior to filling the rates and prices.
- 1.6. The price quoted in the Price Schedules for Schedule 'A', Schedule 'B' and Schedule 'C' are for complete and finished items of the work in all respects. The Price quoted in the Price Schedules shall, except in so far as it is otherwise provided under the Contract, shall include all design, include all necessary survey work, plants, tools, machinery, Contractor's equipment, labour, compliance of labour laws, supervision, materials, transportation, handling,

loading & unloading, storage, sampling, testing, fuel, oil, consumables, electric power, water, all leads & lifts, dewatering, all temporary works including temporary accesses, staging, form works and false works, stacking, provision and maintenance of all temporary works area, construction of temporary store and buildings, fencing, barricading, lighting, drainage arrangements, erection & maintenance of inspection facilities above and below ground such as brick, concrete and steel etc., reinstatement, remedy of any defects during the Defects Notification Period, safety measures for workmen and road users, preparation of design and drawings pertaining to permanent and temporary works, & traffic diversion works, mobilisation and demobilisation, establishment and overhead charges, labour camps, insurance cost for labour and works, contractor's profit, all taxes including Goods and Service Tax (GST), insurance, royalties, duties, cess, octroi, other levies and other charges together with all general risks, liabilities and obligations set out or implied in the Contract.

The price and rates quoted by Tenderer shall be deemed to have included GST at the rate of 18% as notified by 47th GST Council on 29th June 2022

- 1.7. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the Price Schedules, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the Work.
- 1.8. To the extent acceptable to the Employer for the purpose of making payments or partial payments, valuing variations or evaluating claims, or for such other purposes as the Engineer may reasonably require, the Contractor may provide the Engineer with a breakdown of any composite or lump sum items included in the Schedules.
- 1.9. The Provisional Sums included and so designated in the Price Schedules shall be expended in whole or in part at the direction and discretion of the Engineer. The Provisional Sum shall be used to cover the Employer's share of the DAAB members' fees and expenses, in accordance with Clause 21. No prior instruction of the Engineer shall be required with respect to the work of the DAAB in accordance with Sub-Clause 13.4 of Part B-Specific Provisions - Particular Conditions of Contract. The Contractor shall submit the DAAB members' invoices and satisfactory evidence of having paid 100% of such invoices as part of the substantiation of those statements submitted under Sub-Clause 14.3. in accordance with Sub-Clauses 13.4 of the General Conditions.
- 1.10. The prices shall be quoted against Schedule 'A', Schedule 'B' and Schedule 'C' in the Price Schedule (Excel Workbook) uploaded on the e-Procurement portal.
- 1.11. The prices quoted shall be comprehensive and must include for complying in all respects with the Price Schedules, Instruction to Tenderers, the General Conditions, the Particular Conditions, Employer's Requirements, Specifications and Drawings and for all matters and things necessary for the proper construction, completion, and making good of any defect in part or of the whole of the Works.
- 1.12. No claims for additional payment shall be allowed for any error or misunderstanding by the

Contractor of the work involved.

2 Variations in Price Schedule ‘A’, Schedule ‘B’ and Schedule ‘C’

- 2.1** Variations in Price Schedules shall be dealt in accordance with Sub Clause 13.3.1 of Part B-Specific Provisions, Section IX- Particular Conditions of Contract.
- 2.2** The through Chainages mentioned in the Scope of the Works/Tender Drawings can undergo some minor corrections, without any impact on the overall length/Scope of the Works.

3 Measurement and Payment

- 3.1** The measurement shall be made as per Price Schedules i.e. Schedule ‘A’. Schedule ‘B’ and Schedule ‘C’ and other relevant provisions of the Contract such as Employer’s Requirements and the Drawings.
- 3.2** If during execution of the Contract, it is decided by the Employer/Engineer that one or more items of Work/Milestone of a Cost Centre in a particular Price Schedule is not required to be executed, the proportionate amount against that particular Item of Work/Milestones shall not be paid. The Engineer’s decision in this regard shall be final.
- 3.3** The Payment shall be made as per Clause 14 [Contract Price and Payment] of the General Conditions and Particular Conditions.
- 3.4** The Employer shall make interim payments to the Contractor in accordance with the provisions of Sub-Clause 14.6 [Issue of Interim Payment Certificates] of the General Conditions and Particular Conditions, as certified by the Engineer on the basis of the progress achieved for the items of works/stages/Milestones of the works.
- 3.5** The Contractor shall base its claim for interim payment in accordance with Sub-Clause 14.3 [Application for Interim Payment] of the General Conditions and Particular Conditions for each stage for various items of work on the basis of actual progress of work executed (i.e. Milestones achieved) till the end of the month for which the payment is claimed in relation to the Contractor’s total executed quantity, supported with documents and updated programme in accordance with the Employer’s Requirements.
- 3.6** The Employer may carry out necessary tests, either directly or through an independent agency, of the Works done by the Contractor for which payment has been accepted and certified by the Engineer. The payment shall depend upon the outcome of such tests.
- 3.7** Format for the Contractor’s application for payment shall be agreed between the Engineer and the Contractor.
- 3.8** All necessary supplementary details to support progress claims, including all certified Request for Inspection in hard bound copy, shall be included with application for payment. Sketches, drawings, approvals, calculations, test reports etc. shall accompany an application for payment to be substantiated and certified by the Engineer and submitted to the Employer.

- 3.9** Even if no work is executed during the month, or the Contractor does not choose to issue an application for payment, a 'NIL' application shall be submitted.
- 3.10** For the purposes of payment, the Contractor shall submit to the Engineer a detailed Price Schedule indicating a further breakdown for each stage of payment contained in the Price Schedules within forty-two (42) days after the receipt of the Letter of Acceptance. Such cost breakdowns shall be subject to approval of the Engineer who shall review and evaluate with comments and/or issue approval within twenty-eight (28) days of receipt of same. The Contractor shall resubmit the cost breakdown structure corresponding to the Engineer's comments for review, if required.
- 3.11** The Engineer is not obliged to issue an Interim Payment Certificate until such breakdown structure of payment schedule has been submitted and accepted by the Engineer.

4 Methodology for Claiming Payment

- 4.1** The Contractor shall prepare his monthly application for payment in the agreed format in two hard copies and one soft copy. This shall be accompanied by supplementary details in accordance with Sub-Clause 14.3 [Application for Interim Payment Certificates] of the General Conditions. All hard copies shall bear the original signatures of the Contractor's Representative and be submitted to the Engineer.
- 4.2** If these are found in order, in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates] of the General Conditions, then the Engineer shall forward two certified copies of the application along with certified supplementary details to the Employer, with his recommendation for payment; otherwise, all documents shall be returned to the Contractor for rectification and resubmission.

5 Schedules

- 5.1** Schedule "A"- Breakup of Lump Sum cost of Works under various Sub-Heads shall be as follows:

Sub-Head	Description	Percentage of the quoted lump sum cost of Schedule 'A'	No. of Cost Centres	Total Cost of each Sub-Head
1	2	3	4	5
C	Civil & BLT works	96%	6	$C = 0.96 \times LS^*$
E	General Electrical Services	4%	3	$E = 0.04 \times LS$

*LS = Total lump sum cost of Works for Schedule 'A'

5.2 Apportionment of Contract Price for payments under various Cost Centre for Sub-Head 'C'- Civil & BLT Works

Cost Centre	Description of Cost Centre	Percentage of Cost Centre 'C'	Total Cost of Cost Centre	Total Cost of Sub-Head 'C'
1	2	3	4	5
CG	General	2.00%	CG= 0.020x 'C'	96% of SCH 'A'
CE	Earthwork & blanketing	1.15%	CE=0.0115x 'C'	
CB	Bridges	1.44%	CB=0.0144x 'C'	
CTU	Tunnel & Shafts	90.81%	CTU=0.9081x 'C'	
CBT	Ballastless Track	4.52%	CBT=0.0452x 'C'	
CRW	Retaining Wall	0.08%	CRW=0.0008x 'C'	
Total		100%		

Note: Value of 'C' shall be as defined in Sub-Clause 5.1 above.

The percentage figures as filled in column (3) by the Employer for the apportionment of the Contract Price for completion of the Works corresponding to the various Sub-Heads and Cost Centres are fixed and payment will be released for different Cost centre as per above percentage break-up of Contract Price.

5.3 Stages of Payment i.e. Milestones of Cost Centre 'CG'- General

Cost Centre	Sub Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CG' (Y)
		No.	Description			
1	2	3	4	5	6	7
CG- General	CG1- General	CG.1	GT investigation	GT investigations and submission & approval of GIR.	20%	2%
	CG2- Design	CG.2.1		Submission and approval of preliminary and final design and Good for Construction (GFC) drawings of portals, tunnels, permanent ventilation shafts & construction cum utility shaft.	30%	

Cost Centre	Sub Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CG' (Y)
		No.	Description			
1	2	3	4	5	6	7
		CG.2.2		Submission and approval of GAD, final design and Good for Construction (GFC) drawings of bridges and embankment	10%	
		CG.2.3		Submission and approval of preliminary and final design and Good for Construction (GFC) drawings of Ballastless track	20%	
	CG.3- "As Built" Drawings & Documents	CG.3.1	As Built Drawings	On submission of "As Built" Drawings	10%	
		CG.3.2	As Built Documents	On submission of "As Built" Documents	10%	
				Total	100%	

Note:

1. The value of each Milestones will be 96% of total Lumpsum cost of Works under Schedule 'A' multiplied by $X * Y$. For example, for CG.1, Value will be = 0.96 of Lump sum quoted price of Sch AxXxY = $0.96 \times 0.20 \times 0.02$ of lump sum quoted price of Schedule 'A'.
2. Adjustment to Contract Price pursuant to GCC 13.7 shall **NOT** be applicable to the payments of Works executed under this Cost Centre.
3. Payment will be made on Completion of each Milestones as per weightage given in this Cost Centre

5.4 Stages of Payment i.e. Milestones of Cost Centre 'CE'- Earthwork and Blanketing

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CE' (Y)
		No.	Description			
1	2	3	4	5	6	7
CE-Earthwork and Blanketing	CE.1-Earthwork	CE.1.1	Earthwork in formation from Ch 12000 to 12500 for double main line track.			1.15%
		CE1.1.1		Earthwork in embankment / cutting including compaction.	3.4%	
		CE1.1.2		On cutting of slopes in profile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.2%	
		CE1.1.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.2	Earthwork in formation from Ch 12500 to 13000 for double main line track.			
		CE1.2.1		Earthwork in embankment / cutting including compaction.	3.4%	
		CE1.2.2		On cutting of slopes in profile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.2%	

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CE' (Y)
		No.	Description			
1	2	3	4	5	6	7
		CE1.2.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.3	Earthwork in formation from Ch 13000 to 13500 for double main line track.			
		CE1.3.1		Earthwork in embankment / cutting including compaction.	3.4%	
		CE1.3.2		On cutting of slopes in profile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.2%	
		CE1.3.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.4	Earthwork in formation from Ch 13500 to 14000 for double main line track.			
		CE.1.4.1		Earthwork in embankment / cutting including compaction.	3.9%	
		CE.1.4.2		On cutting of slopes in profile, compaction with vibratory roller, turfing	0.2%	

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CE' (Y)
		No.	Description			
1	2	3	4	5	6	7
				& drainage arrangement complete in all respects.		
		CE.1.4.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.5	Earthwork in formation from Ch 14000 to 14500 for double main line track.			
		CE.1.5.1		Earthwork in embankment / cutting including compaction.	4.3%	
		CE.1.5.2		On cutting of slopes in profile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.2%	
		CE.1.5.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.6	Earthwork in formation from Ch 14500 to 15000 for double main line track.			
		CE.1.6.1		Earthwork in embankment / cutting including compaction.	4.3%	

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CE' (Y)
		No.	Description			
1	2	3	4	5	6	7
		CE.1.6.2		On cutting of slopes in profile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.2%	
		CE.1.6.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.7	Earthwork in formation from Ch 15000 to 15500 for double main line track.			
		CE.1.7.1		Earthwork in embankment / cutting including compaction.	4.3%	
		CE.1.7.2		On cutting of slopes in profile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.3%	
		CE.1.7.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.8	Earthwork in formation from Ch 15500 to 16000 for double main line track.			

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CE' (Y)
		No.	Description			
1	2	3	4	5	6	7
		CE.1.8.1		Earthwork in embankment / cutting including compaction.	4.3%	
		CE.1.8.2		On cutting of slopes in profile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.3%	
		CE.1.8.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.9	Earthwork in formation from Ch 16000 to 16500 for double main line track.			
		CE.1.9.1		Earthwork in embankment / cutting including compaction.	4.3%	
		CE.1.9.2		On cutting of slopes in profile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.3%	
		CE.1.9.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.10	Earthwork in formation from Ch 16500 to 17000 for double			

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CE' (Y)
		No.	Description			
1	2	3	4	5	6	7
			main line track.			
		CE.1.10.1		Earthwork in embankment / cutting including compaction.	4.3%	
		CE.1.10.2		On cutting of slopes in profile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.3%	
		CE.1.10.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.11	Earthwork in formation from Ch 17000 to 17500 for double main line track.			
		CE.1.11.1		Earthwork in embankment / cutting including compaction.	5.0%	
		CE.1.11.2		On cutting of slopes 151 utile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.4%	
		CE.1.11.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.12	Earthwork in formation from Ch			

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CE' (Y)
		No.	Description			
1	2	3	4	5	6	7
			17500 to 18000 for double main line track.			
		CE.1.12.1		Earthwork in embankment / cutting including compaction.	5.0%	
		CE.1.12.2		On cutting of slopes in profile, compaction with vibratory roller, turfing & drainage arrangement complete in all respects.	0.4%	
		CE.1.12.3		After completion of maintenance period for turfing, if properly rooted.	0.2%	
		CE.1.13	Earthwork in formation from Ch. 29580 to 29680	On completion of earthwork in cutting including turfing and drainage arrangement complete in all respect.	4.9%	
	CE.2-Blanketing	CE.2.1	Blanketing from Ch 12000 to 12500 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	
		CE.2.2	Blanketing from Ch 12500 to 13000 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	
		CE.2.3	Blanketing from Ch 13000 to	Blanketing on subgrade/ prepared subgrade as per design profile including	3.3%	

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CE' (Y)
		No.	Description			
1	2	3	4	5	6	7
			13500 for double main line track.	compaction complete in all respects.		
		CE.2.4	Blanketing from Ch 13500 to 14000 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	
		CE.2.5	Blanketing from Ch 14000 to 14500 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	
		CE.2.6	Blanketing from Ch 14500 to 15000 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	
		CE.2.7	Blanketing from Ch 15000 to 15500 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	
		CE.2.8	Blanketing from Ch 15500 to 16000 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CE' (Y)
		No.	Description			
1	2	3	4	5	6	7
		CE.2.9	Blanketing from Ch 16000 to 16500 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	
		CE.2.10	Blanketing from Ch 16500 to 17000 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	
		CE.2.11	Blanketing in formation from Ch 17000 to 17500 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	
		CE.2.12	Blanketing from Ch 17500 to 18000 for double main line track.	Blanketing on subgrade/ prepared subgrade as per design profile including compaction complete in all respects.	3.3%	
Total					100%	

Note:

- The value of each Milestones will be 96% of total Lumpsum cost of Works under Schedule 'A' multiplied by X * Y. For example, for CE.1.1.1, Value will be = 0.96 of Lump sum quoted price of Sch AxXxY= 0.96x0.035 x 0.0115 of lump sum quoted price of Schedule 'A'.
- Adjustment to Contract Price pursuant to GCC 13.7 shall be applicable to the payments of Works executed under this Cost Centre / Price Schedule.

3. Payment will be made on Completion of each Milestones as per weightage given in this schedule.

5.5 Stages of Payment i.e. Milestones of Cost Centre 'CB'- for Bridges

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CB' (Y)	
		No.	Description				
1	2	3	4	5	6	7	
CB-Bridges	CB.1-Minor Bridges	CB1.1	Construction of minor bridge No. 47, 48 & 49 between ch 12000 to 12500 for main line track.	On completion of RCC box/Pipe bridge including *	22.4%	1.44%	
		*wing wall, return wall, drop wall, curtain wall, face wall, flooring, backfill, protection works, inspection steps, bridge number plaque, painting of HFL, height gauge, drainage arrangement, road works in RUBs and other balance works complete as per approved drawings and ODS & OCS.					
		CB1.2	Construction of minor bridge No. 50 between ch 12500 to 13000 for main line track.	On completion of RCC box bridge including *	5.6 %		
		CB1.3	Construction of minor bridge No. 51 between ch 13000 to 13500 for main line track.	On completion of RCC box bridge including *	6.3 %		
		CB1.4	Construction of minor bridge No. 52 between ch 13500 to 14000 for main line track.	On completion of RCC box bridge including *	4.4 %		
		CB1.5	Construction of minor bridge No. Nil between ch 14000 to 14500 for main line track.	On completion of RCC box bridge including *	0%		

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CB' (Y)
		No.	Description			
1	2	3	4	5	6	7
		CB1.6	Construction of minor bridge No. 54 & 55 between ch 14500 to 15000 for main line track.	On completion of RCC box bridge including *	21.7%	
		CB1.7	Construction of minor bridge No. 56 between ch 15000 to 15500 for main line track.	On completion of RCC box bridge including *	5.8%	
		CB1.8	Construction of minor bridge No. 57 between ch 15500 to 16000 for main line track.	On completion of RCC box bridge including *	14.8%	
		CB1.9	Construction of minor bridge No. Nil between ch 16000 to 16500 for main line track.	On completion of RCC box bridge including *	0%	
		CB1.10	Construction of minor bridge No. Nil between ch 16500 to 17000 for main line track.	On completion of RCC box bridge including *	0%	
		CB1.11	Construction of minor bridge No. Nil between ch 17000 to 17500 for main line track.	On completion of RCC box bridge including *	0%	
		CB1.12	Construction of minor bridge No. Nil between ch 17500 to 18000	On completion of RCC box bridge including *	0%	

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CB' (Y)
		No.	Description			
1	2	3	4	5	6	7
			for main line track.			
	CB.2-Major Bridges	CB.2.1	Foundation	On completion of the foundation work including pile caps/well caps and foundations for wing and return walls and pile load testing.	4.0%	
		CB.2.2	Substructure	On Completion of Abutment/Piers including Abutment/Pier Cap without bearings.		
		CB.2.2.1			Pier/Abutment	3%
		CB.2.2.2			Pier/Abutment cap	0.5%
		CB.2.2.3			Completion of the wing walls, return walls in all respects	2.5%
		CB.2.3	PSC slabs of superstructure	On completion of superstructure in all respect.	5.0%	
		CB.2.4		On completion of balance works as per drawing like-Protection works including Toe wall, Pitching, inspection platform at each pier & abutment, inspection steps, Bridge plaque, Bridge board, painting of HFL and Testing on completion, if any,	4%	

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'CB' (Y)
		No.	Description			
1	2	3	4	5	6	7
				complete in all respect and fit for use.		
				Total	100%	

Note:

1. The value of each Milestones will be 96% of total Lumpsum cost of Works under Schedule 'A' multiplied by X * Y. For example, for CB1.1, Value will be = 0.96 of Lump sum quoted price of Sch AxXxY= 0.96x0.224 x 0.0144 of lump sum quoted price of Schedule 'A'.
 2. Adjustment to Contract Price pursuant to GCC 13.7 shall be applicable to the payments of Works executed under this Cost Centre / Price Schedule.
 3. Payment will be made on Completion of each Milestones as per weightage given in this schedule.
 4. CB2-Major Bridges:
 - (ii) For the purpose of stage payment/Milestones, cost of a bridge shall be taken in proportion to its linear length measured along the alignment to the total linear length of all major bridges.
 - (iii) Payment of each stage/Milestones for a bridge will be made on completion of the relevant stage as per the weightage given in this schedule in proportion to the cost of the bridge.
 5. Stages CB.2.1 to CB.2.2 will further be subdivided into the number of piers + 2 abutments, as applicable as per approved drawing by the Engineer, and Milestones for completed work for each pier and abutment shall be made as per the requirement of the stages stated above.
5. For PSC slabs payment against sub cost centre 2.3 shall be released as per following schedule-
- | | |
|-------------------------------------|-----|
| (i) On casting of PSC slabs: | 50% |
| (ii) On prestressing: | 20% |
| (iii) On completion in all respect: | 30% |

5.6 Stages of Payment i.e. Milestones of Cost Centre 'CTU'- Tunnel & Shafts

Cost Centre	Sub-cost Centre	Item of Work		Milestone	Weight age (X)	Weightage of Sub-Cost Centre 'CTU' (Y)
		No.	Description			
1	2	3	4	5	6	7
CTU-Tunnel	CTU.1 Permanent ventilation Shafts and Construction cum utility shaft	CTU1.1	Completion of excavation for construction of permanent ventilation shafts and Construction cum utility shaft			90.81%
		CTU1.1.1		Construction of Permanent Ventilation Shaft No. 1 at Chainage 26080	0.8%	
		CTU1.1.2		Construction of Permanent Ventilation Shaft No. 2 at Chainage 26080	0.8%	
		CTU1.1.3		Construction of Permanent Ventilation Shaft No. 3 at Chainage 27680	0.8%	
		CTU1.1.4		Construction of Permanent Ventilation Shaft No. 4 at Chainage 27680	0.8%	
		CTU1.1.5		Construction of Construction cum Utility Shaft at Chainage 26950	0.8%	
	CTU.2-NATM Drive	CTU2.1	On completion of first round of the Excavation by NATM from			
		CTU2.1.1		Face F1	0.5%	

Cost Centre	Sub-cost Centre	Item of Work		Milestone	Weight age (X)	Weightage of Sub-Cost Centre 'CTU' (Y)
		No.	Description			
		CTU2.1.2		Face F2	0.5%	
		CTU2.1.3		Face F3	0.5%	
		CTU2.1.4		Face F4	0.5%	
		CTU2.1.5		Face F5	0.5%	
		CTU2.1.6		Face F6	0.5%	
		CTU2.1.7		Face F7	0.5%	
		CTU2.1.8		Face F8	0.5%	
		CTU2.1.9		Face F9	0.5%	
		CTU2.1.10		Face F10	0.5%	
		CTU2.1.11		Face F11	0.5%	
		CTU2.1.12		Face F12	0.5%	
		CTU2.1.13		Face F13	0.5%	
		CTU2.1.14		Face F14	0.5%	
	CTU.3	CTU.3.1		NATM Main Drive of both tunnels from chainage 24880m to 26067.5m	On Completion of NATM Main Drive (On account payment will be made on proportionate basis based on actual work progress in m divided by Total length of NATM drive)	11%
		CTU.3.2	NATM Main Drive of both tunnels from chainage 26092.5m to 27667.5m and from chainage 27692.5m to 28480m	On Completion of NATM Main Drive (On account payment will be made on proportionate basis based on actual work progress in m including Benching divided by Total length of NATM drive)	37.4%	

Cost Centre	Sub-cost Centre	Item of Work		Milestone	Weight age (X)	Weightage of Sub-Cost Centre 'CTU' (Y)
		No.	Description			
	CTU.4- Secondary Lining	CTU4.1	Secondary lining in both tunnels in NATM portion	On completion of Secondary Lining (on account payment will be made on proportionate basis based on actual progress of work in meter divided by Total length of NATM tunnel)	14%	
	CTU.5- Cut & Cover Tunnel	CTU 5.1	Excavation of Cut & Cover Tunnel	Excavation for Cut & Cover tunnel (On account payment will be made on proportionate basis based on actual progress of work in sqm on Plan divided by Total area in sqm on Plan)	4.6%	
		CTU 5.2	Cut & Cover Tunnel Structures	Completion of Cut & Cover Tunnel Structures including backfill & drainage arrangement (on account payment will be made on proportionate basis based on actual work progress in sqm on Plan divided by Total area in sqm on Plan)	10%	

Cost Centre	Sub-cost Centre	Item of Work		Milestone	Weight age (X)	Weightage of Sub-Cost Centre 'CTU' (Y)
		No.	Description			
	CTU5-Cross Passage	CTU5.1	Cross Passage	Construction of Cross Passages	3.0%	
	CTU6-Miscellaneous works	CTU6.1	Miscellaneous	Construction of Portals, Footpath, Drainage, Restoration of the Areas etc. complete in all respect.	9.0%	
				Total	100%	

Note:

1. The value of each Milestones will be 96% of total Lumpsum cost of Works under Schedule 'A' multiplied by X * Y. For example, for CTU1.1.1, Value will be = 0.96 of Lump sum quoted price of Sch AxXxY = 0.96x 0.008x 0.9081 of lump sum quoted price of Schedule 'A'.
2. Adjustment to Contract Price pursuant to GCC 13.7 shall be applicable to the payments of Works executed under this Cost Centre / Price Schedule.

5.7 Stages of Payment i.e. Milestones of Cost Centre ‘CBT’- Ballastless Track

Cost Centre	Sub-Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre ‘CBT’ (Y)
		No.	Description			
1	2	3	4	5	6	7
CBT-Ballastless Track	CBT.1	CBT1.1	Supply of Fastening system	On supply of Track fitting/fastening system complete	15%	4.52%
		CBT1.2	Construction of ballastless track	Construction of ballastless track (On account payment will be made on proportionate basis based on actual work progress in meter divided by total length of ballastless track)	65%	
		CBT1.3	Misc. works	On completion of all balance works as per drawings like welding into LWR, destressing, drainage, supply of spare fastenings for BLT etc. complete.	10%	
		CBT1.3	Maintenance	Maintenance of ballastless track for one year after start of traffic (to be paid monthly on pro rata basis based on satisfactory performance certificate by the Engineer.)	10%	
					Total	

Note:

- The value of each Milestones will be 96% of total Lumpsum cost of Works under Schedule ‘A’ multiplied by X * Y. For example, for CBT1.1, Value will be = 0.96 of Lump sum quoted price of Sch AxXxY= 0.96x0.15 x0.0452 of lump sum quoted price of Schedule

‘A’.

2. Adjustment to Contract Price pursuant to GCC 13.7 shall be applicable to the payments of Works executed under this Cost Centre / Price Schedule.

5.8 Stages of Payment i.e. Milestones of Cost Centre 'CRW'- Retaining Wall

Cost Centre	Sub-cost Centre	Item of Work		Milestone	Weight age (X)	Weighta ge of Sub-Cost Centre 'CRW' (Y)
		No.	Description			
1	2	3	4	5	6	7
CRW- Retaining Wall	CRW.1	CRW.1.1	Supply of precast retaining wall segments	On supply of precast retaining wall segments at site.	40%	0.08%
		CRW.1.2	Installation	On installation of precast segments in position including joining & grouting.	20%	
		CRW.1.3	Backfill & other works	On completion of all balance works such as boulder backing, granular backfill complete in all respects.	40%	
Total					100%	

Note:

1. The value of each Milestones will be 96% of total Lumpsum cost of Works under Schedule 'A' multiplied by X * Y. For example, for CRW.1.1, Value will be = 0.96 of Lump sum quoted price of Sch AxXxY= 0.96x0.40 x 0.0008 of lump sum quoted price of Schedule 'A'.
2. Adjustment to Contract Price pursuant to GCC 13.7 shall be applicable to the payments of Works executed under this Cost Centre / Price Schedule.

6 Apportionment of the Contract Price for Schedule ‘A’ Under Various Cost Centre for Sub-Head Various General Electrical Services Works

Cost Centre	Description of Cost Centre	Percentage of Cost Centre	Total Cost of Cost Centre	Total Cost of Sub-Head “E”
1	2	3	4	
E1	General Electrical Services works	94.36%	$E1=0.9436 \times 'E'$	4% of Schedule ‘A’
E2	Inventory/ Spare item	4.83%	$E2=0.0483 \times 'E'$	
E3	Maintenance and Manning of electrical system for one year	0.81%	$E3=0.0081 \times 'E'$	
Total		100%		

6.1 Stages of Payment i.e. Milestones of cost center E1. – General Electrical Services works

Cost Centre	Sub Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'E1' (Y)
		No	Description			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
E1- (General Electrical Services works)	E1.1	E1.1.1	Drawing and Design	Preparation and Submission of Drawing and Design for General Electrical Services works, Plan, Specifications, Load calculations, Reports and Drawing of civil structure/building for sub- stations etc. required for commissioning of Electrical System.	5.00%	94.36 %
	E1.2	E1.2.1	Supply of Electrical Equipment and associated materials	Supply of equipment and associated material for the Electrical system and material for construction of civil structure/building for sub- stations. i. Major Electrical item like – 11 kVA GIC Panel, Transformers, DG sets, All types of cables, Cable Tray, LT Panels, all types of LED fittings and its associated items.	60.00%	

Cost Centre	Sub Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'E1' (Y)
		No	Description			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	E1.3	E1.3.1	Installation & Erection of Electrical Equipments	Delivery to Site from , Installation and Site Testing of all equipments for Electrical system (includes pre-installation tests and post installation tests). i. Construction of building for substations. ii. Installation of all Electrical equipment iii. Installation of all required sensors and Earthing system.	20.00%	
	E1.4	E.1.4.1	Testing and Commissioning	System Acceptance Tests (SAT) and Integrated Commissioning and Charging of Total Electrical system	15.00%	
				Total	100%	

Note:

- 1 The value of each Milestone will be 4% of total Lump sum cost of Works under Schedule 'A' multiplied by X * Y. For example, for E1.1.1, Value will be 0.04 of Lump sum quoted price of Sch A * X * Y= 0.04 x 0.05x 0.9436 of lump sum quoted price of Schedule 'A'.
- 2 Adjustment to Contract Price Shall Not be applicable E1.1 to the payments of Works executed under Cost Centre 'E1'.
- 3 Payment will be made on completion of each Milestones as per weightage given in this Cost Centre.
- 4 Payment against the Sub Cost Centre E1.2 shall be made for quantities as per the Approved Design, on receipt of Material at contractor's depot, production of inspection certificates & other documents and against BG of equivalent amount.

5. Payment against each Sub Cost Centre shall be made only on completion of work under Sub Cost Centre.

6.2 Stages of Payment i.e. Milestones of cost center E2 – Inventory /Spare Item

Cost Centre	Sub Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'E2' (Y)
		No	Description			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
E2 Inventory /Spare item)	E2.1	E2.1.1	Inventory /Spare item	Supply of Spares equipment and tools in stores	100%	4.83%
				Total	100%	

Note:

1. The value of each Milestone will be 4% of total Lump sum cost of Works under Schedule 'A' multiplied by X * Y. For example, for E2.1, Value will be 0.04 of Lump sum quoted price of Sch A * X * Y= 0.04 x 1 x 0.0483 of lump sum quoted price of Schedule 'A'.
2. Adjustment to Contract Price shall be applicable to the payments of Works executed under Cost Centre 'E2'.
3. Payment will be made on completion of each Milestones as per weightage given in this Cost Centre.

6.3 Stages of Payment i.e., Milestones of Cost Centre E3 – Maintenance and Manning of Electrical system

Cost Centre	Sub Cost Centre	Item of Work		Milestone	Weightage (X)	Weightage of Cost Centre 'E3' (Y)
		No	Description			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
E3- (Maintenance and Manning of Electrical system)	E3.1	E3.1.1	Maintenance and Manning for one year	Maintenance and Manning of Electrical system	100.00%	0.81%

Note:

- 1.The value of each Milestone will be 4% of total Lump sum cost of Works under Schedule 'A' multiplied by X * Y. For example, for E3.1, Value will be 0.04 of Lump sum quoted price of Sch A * X * Y= 0.04 x 1x 0.0081 of lump sum quoted price of Schedule 'A'.
2. Adjustment to Contract Price shall be applicable to the payments of Works executed under Cost Centre 'E3'.
- 3.Payment will be made on completion of each Milestones as per weightage given in this Cost Centre.

7 Schedule 'B': Other civil works

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
Schedule B1:- NWR-USSOR 2019 BASED ITEMS							
1	022010	Earthwork in excavation by mechanical means (Hydraulic Excavator)/Manual Means for foundations and floors of the bridges, retaining walls etc. including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil upto a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer. Note: This item will be used for excavation work in connection with other miscellaneous works also like side drains, foundation for OHE masts and other miscellaneous structures in connection with Gauge Conversion, Doubling, New lines.					
i	022011	All kinds of soils	6000	Cum	195.57	12.13%	13,15,740.00

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
2	022040	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete of specified grade (M-20 Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in RCC raft foundation & Pile cap including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra. Note -Cement concrete in drainage and other miscellaneous works shall be paid under this item.	1,066	Cum	2,840.33	12.13%	33,94,964.82
3	023010	Earth work in OPEN excavation in foundation of bridges, for placing of well curbs of all shapes and designs in all kinds of soil including taking out the excavated soil, levelling, ramming of bottom of excavation and trimming of sides, returning the soil in layers, consolidation, disposal of surplus soil within a lead of 300m, including all lift, dewatering, shoring and strutting complete as per technical specification and as directed by Engineer in charge. (compaction of surplus soil when led to the bank will be paid as per relevant item separately)	300	Cum	293.36	12.13%	98,682.00

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
4	023030	Supplying, Fabrication, assembly, erection & placing in position the cutting edge of well curb with structural steel including MS sheet/Plates of specified thickness for pier/abutment complete as per approved plans and as per direction of Engineering In charge including all operations like cutting, bending, straightening, drilling holes, bolting, riveting, welding, threading, jointing of steel sections including outer and inner places liners and skin plates, stiffeners, hooks, bottle nuts, bond rods etc. as per design including all ascent, descents, leads, lifts, handing, re-handling, all other obstructions whatsoever, diverting channels, pumping / bailing out of water wherever required including cost of steel such as flats, sheets, angles, steel bars etc. with all labour and material as a complete job	9	MT	96,774.58	12.13%	9,76,592.16
5	023040	Dry/Wet Sinking of Circular Wells (Other than pneumatic method) in all types of strata except hard rock requiring ballasting, including bailing and pumping out water, removal of excavated soil with all labour and material required for sinking as per drawing and direction of the Engineer in charge, disposal of surplus soil in the adjoining bank/embankment (compaction to be paid separately under the relevant item).					
i	023041	From initial level of cutting edge & upto 3m depth	777	Cum	183.34	12.13%	1,59,769.00
ii	023042	Above 3m to 10m depth	1,813	Cum	294.64	12.13%	5,99,092.96

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
iii	023043	Above 10m to 15m depth	1,295	Cum	410.28	12.13%	5,95,876.86
iv	023044	Above 15m to 20m depth	1,295	Cum	563.53	12.13%	8,18,461.21
v	023045	Above 20m to 25m depth	1,295	Cum	809.02	12.13%	11,75,005.49
vi	023045	Above 25m to 30m depth	648	Cum	1,249.18	12.13%	9,07,213.96
6	023090	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete of specified grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in the following elements of well including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per drawings and technical specifications as directed by Engineer. Payment for cement, reinforcement and shuttering shall be made extra.					
i	023091	In well Curb	249	Cum	3,124.37	12.13%	8,71,260.76
ii	023092	In Steining of wells	3,338	Cum	3,124.37	12.13%	1,16,94,932.86
iii	023093	In Bottom plug for wells including arrangements for placing concrete under water with tremie or bottom opening skips.	432	Cum	3,124.37	12.13%	15,12,707.67
iv	023095	In Intermediate/Top plug with internal shuttering	259	Cum	2,982.35	12.13%	8,66,432.99
v	023096	In Well cap and corbel, if provided	412	Cum	2,982.35	12.13%	13,78,735.32
7	023100	Supplying and filling ordinary sand in between bottom plug and top plug in wells including all lead lift handling, re-handling, as a complete job. Sand should be simultaneously filled with water for					

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
		three days to achieve full compaction so that further chances of shrinkage due to voids are eliminated					
i	023102	Using sand from other than River bed (This item is to be operated if suitable sand is not available in River Bed for filling	3,173	Cum	2,031.30	12.13%	72,27,831.04
8	025020	Providing and applying two coats of coal tar or bitumen confirming to IS:3117– latest version on the top and sides of RCC box/slabs @ 1.70 kg/sqm after cleaning the surface with all labour and materials complete job as directed by the Engineer	3,150	Sqm	155.67	12.13%	5,49,832.50
9	025030	centering and shuttering including strutting, propping etc. and removal of form for :					
i	025031	All types of bridge sub-structures, e.g. pier, abutment, wing wall, retaining wall, RCC box type foundations, Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc. upto 5m above ground level	14,000	Sqm	671.94	12.13%	1,05,47,880.00
ii	025032	All types of bridge super-structures, e.g. slabs, I-girders, T-girders, Box girders etc. upto 5m above ground level	2,700	Sqm	874.49	12.13%	26,47,458.00
iii	025033	Extra for additional height over item no. 025031 & 025032 wherever required with adequate bracing, propping etc. over initial height of 5 metres for every additional height of 1 metre or part thereof	1,800	Sqm	110.17	12.13%	2,22,354.00
10	025060	Supply and using Cement at Worksite					

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
i	025062	Ordinary Portland Cement 53 grade	275	MT	7,398.80	16.55%	23,71,347.00
ii	025063	Pozzolana Portland Cement	1840	MT	6,905.10	16.55%	1,48,07,749.60
11	025070	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete					
i	025072	Thermo-Mechanically Treated bars of grade Fe-500D or more.	13,90,900	Kg	78.01	12.42%	12,19,81,930.00
12	031020	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete of specified grade using 20mm graded crushed stone aggregate and coarse sand of approved quality for the Precast Prestressed (Post tensioned) concrete girder/Box (spans upto 30.5m) in contactor's casting yard, including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability, complete as per drawings, specifications and direction of the Engineer. Payment for Shuttering, Cement, reinforcement, HTS cables, anchorage cones, stressing of cables and grouting of the ducts will be done extra. Launching of girder/slab in position is not included in this item.	290	Cum	2,840.33	12.13%	9,23,583.30
i	031021	Deduct from 0310220 for casting of Slab in place of Girder/Box	290	Cum	42.48	12.12%	-13,812.70

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
13	031040	Providing, fabricating & fixing in position to exact design profiles, prestressing H.T.S. cables of all classification made from Low Relaxation strands conforming to IS:14268– latest version in Prestressed (Post tensioned) Concrete girders/slabs etc. including supplying, cutting, making into cables with necessary spacers, colour coding, protecting with water soluble oil at all time, anchoring of cables, supplying and placing spiral corrugated type galvanized metal steel ducts sheathing made up of Cold Rolled Cold Annealed (CRCA) mild steel conforming to IS:513 of required diameter/ thickness, vent pipe, placing, bending, routing, fixing, stressing & grouting of cable ducts with cement grout, Anchorage sets in required number with provision for future prestressing if any including all lead and lift with contractor's own materials, labour, equipments etc. complete as per drawings & specifications. Rate also includes covering anchorage pads with epoxy mortar of approved quality to avoid corrosion. Cement for grouting to be paid separately. Payment shall be made in terms of weight of HTS cables as per drawing.	13	MT	1,79,099.63	29.90%	30,24,525.27
14	031140	Providing and fixing in position GI Drainage Spouts of required length with Grating in RCC slab and filling bitumen along kerb as shown in drawing with contractor's pipes, bitumen, tools, equipment,					

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
		lead, lifts etc. complete as per specifications and as directed by Engineer in-charge					
i	031142	100mm dia. Drainage Spouts	120	Metre	1,202.50	12.13%	1,61,798.40
15	041330	Launching & fixing in specified Bridge location all types of Steel Plate girders / PSC girders / Slabs including loading/unloading and transport to the site of launching with a lead of five kilometres & lifting to any height as per site requirement, provision of approaches for leading, cleaning of bed block and minor repairs to bed block with epoxy if required, as directed by Engineer in charge with all labour, tools and plant, equipment etc., complete					
i	041331	PSC girders / slabs	910	MT	6,346.14	12.13%	64,75,305.20
16	041390	Supplying fabricating and erecting welded and/or bolted and/or riveted steel work in built up sections, trusses and framed work, staging, racks etc. for Steel Structures other than bridge girders, using RSJ, tees, angles and channels/flats, plates, gussets, round or square bars, cleats, bolts etc., with contractors own steel including cutting, bending, straightening, drilling, riveting, hoisting, fixing, erecting, welding, bolting etc., with Providing stiffeners wherever required as per approved drawing including applying a priming	70	MT	86,019.71	42.09%	85,55,959.30

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
		coat of a approved steel primer with all contractor's materials, labour, tools & plants, lead & lift including crossing of tracks if required etc., complete as per specification and as directed by Engineer-in-charge.					
17	052230	Providing cast in situ bridge number plaques as per Railway drawing in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm notch in Bridge parapet coping duly engraving the letter and figures and an arrow indicating the direction of flow and finishing the top exposed surface with cement mortar 1:3, painting letters and figures with two coats of black enamel paint on two coats of white background with all labour, tools, cement, paint etc. with all leads and lifts.	5	Each	801.69	12.13%	4,494.55
18	052240	Providing cast in-situ plaques for bridge foundations details of size 45cmx45cmx5cm in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm deep notch over abutment & piers, engraving the letters & figures with CM 1:3 and finished smooth including painting letters and figures with 2 coats of black enamel and plaque with white enamel with all labour, tools, cement, paint, curing etc. as a complete job.	10	Each	1,049.88	12.13%	11,772.00
Schedule B2:- DSR-2021 BASED ITEMS							

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
19	10.16	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.					
i	10.16.2	Hot finished seamless type tubes	2,000	Kg	168.95	8.64%	3,67,100.00
20	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	800	Kg	612.25	8.64%	5,32,112.00
21	16.30.1	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications On W.B.M. @ 0.75 Kg / sqm	4,252.60	Sqm	45.20	8.65%	2,08,845.19

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
22	16.32.1	2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately).With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	4,125	Sqm	189.25	8.64%	8,48,100.00
23	16.36.1	Providing and laying Bitumen Penetration Macadam with hard stone aggregate of quality, size and grading as specified, with bitumen of suitable penetration grade, including required key aggregate as specified, spreading coarse aggregate with the help of self propelled/ tipper tail mounted aggregate spreader and applying bitumen by a pressure distributor and then spreading key aggregate with the help of aggregate spreader complete, including consolidation with road roller of minimum 8 to 10 tonne capacity to achieve specified values of compaction and surface accuracy For 50mm compacted thickness using coarse aggregate of size 50-20 mm graded @ 0.60 cum per 10 sqm key aggregate of size 12.5 mm graded @ 0.15 cum per 10	6,050	Sqm	414.20	8.64%	27,22,379.00

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
		sqm. With paving asphalt grade VG - 10 @ 50 kg/10 sqm.					
24	16.36.2	Providing and laying Bitumen Penetration Macadam with hard stone aggregate of quality, size and grading as specified, with bitumen of suitable penetration grade, including required key aggregate as specified, spreading coarse aggregate with the help of self propelled/ tipper tail mounted aggregate spreader and applying bitumen by a pressure distributor and then spreading key aggregate with the help of aggregate spreader complete, including consolidation with road roller of minimum 8 to 10 tonne capacity to achieve specified values of compaction and surface accuracy For 75 mm compacted thickness in two layers using stone aggregate of size 63- 41 mm graded @ 0.90 cum per 10 sqm key aggregate of size 20.0 mm graded @ 0.18 cum per 10 sqm. With paving asphalt grade VG - 10 @ 68 kg/10 sqm	6,050	Sqm	611.55	8.64%	40,19,499.00
25	16.40	Providing and laying seal coat of premixed fine aggregate (passing 2.36 mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG - 10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface, including rolling and finishing with road roller all complete	4,125	Sqm	79.85	8.64%	3,57,843.75

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
26	16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	20	Cum	8,613.55	8.64%	1,87,154.20
27	16.79	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge	550	Cum	2,803.65	8.64%	16,75,228.50

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
28	16.91	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.					
i	16.91.1	60 mm thick C.C. paver block of M-30 grade with approved color design and pattern.	450	SQM	932.35	8.64%	4,55,805.00
29		Items included in Delhi Schedule of Rate- (Horticulture & Landscaping) 2020		LS		6.00%	10,60,000.00
Schedule B3:- NS BASED ITEMS							
30	NS-1	Earthwork in filling with contractor's own earth of approved quality from borrow areas including all lead all lead, lift, ascent, descent, royalty, taxes, cess, compensation, crossing of nallahs /stream and other obstructions including mechanical compaction in layers with watering to 95% of MDD (as per IS 2720 part 8), handling, re-handling, dressing to the final profile with all labour, material, tools, plant, machinery and	2,000	Cum	271.46	6.00%	5,75,500.00

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
		equipment, taxes, cess etc. as a complete job in accordance with the specification and drawings.					
31	NS-2	Supplying and laying in position M-35 RCC as per approved design mix with admixtures and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all lifts & leads, having continuous agitated mixer, pumping concrete from transit mixer to site of laying, compacting, finishing & curing, with all labour, material, tools, plants, machinery and equipment, taxes, cess etc., as a complete job ,but excluding supplying & fixing form work (centring & shuttering),in accordance with the specification and drawings. Note – (i) Cost of cement is included in the above item. (ii) Cost of Reinforcement steel is not included in the above item and will be paid separately under item no.8(I) (USSOR item No. 025072) (iii) Cost of supplying & fixing form work (centring & shuttering) is not included in the above item (except pile cap & open foundation) and will be paid separately under relevant item no. 6(i),(ii),(iii) (USSOR item No. 025030)					
i	NS-2A	In Pile caps, open foundation & RCC Box/Sub way, well steining, well cap	4,000	Cum	7,776.37	6.00%	3,29,71,800.00
ii	NS-2B	In Piers, abutments, box	960	Cum	8,098.18	6.00%	82,40,707.20

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
iii	NS-2C	Abutment cap & Pier Cap, pedestals, approach slab, Deck slab	460	Cum	8,421.36	6.00%	41,06,254.40
iv	NS-2D	Retaining walls, wing walls, return walls, drop walls, curtain walls, toe walls etc. of all heights	700	Cum	7,888.74	6.00%	58,53,442.00
32	NS-3	Providing Boulder Backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles not less than 15cm in any direction & not less than 15kg (except smaller boulders required for filling voids) including all lead, lift, labour & other incidental charges as complete work in all respect. Cost of boulder/cobbles is included in this item.	1,900	Cum	1,475.82	6.00%	29,72,303.00
33	NS-4	Providing and fixing Weep Holes in Abutments, RCC Box, Wing walls and Return walls etc., of new bridges with 110mm dia UPVC pipe (IS :13592) Type A ISI marked with all contractor's men, material, transportation, all taxes as per specifications and as directed by Engineer-in-Charge.	1,500	Rmt	266.91	6.00%	4,24,380.00
34	NS-5	Providing and fixing of 75mm dia PVC pipe for weep holes in abutments, Wing Wall, Return Wall, Face wall, retaining wall etc. at suitable intervals as directed by the Engineer-in-charge.	1,000	Rmt	231.00	6.00%	2,44,860.00
35	NS-6	Providing and laying of filter media consisting of granular materials of GW, GP, SW groups as per IS:1498 (latest) in required profile behind boulder filling of abutments, wing walls / return walls etc. above bed level with all labour and material	8,500	Cum	2,441.23	6.00%	2,19,95,450.00

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
		complete job as per drawing and technical specification of RDSO Guidelines.					
36	NS-7	<p>Casting, supplying and installation of Pre-cast cement concrete blocks of size 25X25 X20cm. or of required size as directed by the Engineer for protective works at bridges & banks like pitching, toe wall, flooring, drains etc. using M20 design concrete mix with 20mm aggregate size including Contractor's shuttering, leading to bridge site from casting depot, including dressing and levelling of surface, providing gravel backing, laying & jointing blocks with cement mortar 1:3 with Contractor's labour and as directed by Engineer-in-charge (All labour and materials including cement by Contractor).</p> <p>Note:</p> <p>i) Payment for gravel backing will be paid under item no. NS-12 of this Bill.</p> <p>ii) 60% Payment shall be made after casting of pre-cast concrete blocks and bringing at work site. The balance 40% will be made on completion of laying and finishing.</p> <p>iii) Measurement is based on quantity calculation of blocks used only (no of blocks x volume of one block).</p>	1,400	Cum	7,731.14	6.00%	1,14,73,014.00
37	NS-8	Supplying and laying of 150mm thick well graded stones aggregate/gravel as base layer over the slopes of embankment with manual dressing with	1,080	Cum	2,139.90	6.00%	24,49,753.20

Schedule 'B' Other Civil Works							
S. No	Item No.	Description of Item	Quantity	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated amount in INR
		water compaction including the cost of supply of all material, labour, lead, lift, tools, plants, crossing of tracks etc. complete as per approved drawings and technical specifications.					
38	NS- 9	Supply & installation of precoated galvanized iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50mm +/- 5% total coated thickness (TCT) thick Zinc coating 120gsm as per IS:277 in 240mpa steel grade, 5-7microns epoxy primer on both side of the sheet and polyester topcoat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches while transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling / self tapping screws of size (5.5 x 55mm) with EPDM seal or with polymer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead complete upto any pitch in horizontal/vertical or curved surfaces excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	100	Sqm	756.52	6.00%	80,191.00
Total Estimated Amount of Schedule 'B'							30,96,87,196.96

8 Schedule C: Item rate for miscellaneous works

Schedule C						
Item rate for miscellaneous works						
S. No	Item Reference DSR-21/ USSOR- 2019(NWR)/ NS	Description of Item	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated Rate in INR
C1-Civil Works						
1	DSR-21 19.35	Providing and laying Non Pressure NP-3 class (Medium duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete.				
i	19.35.1	450mm dia. RCC pipes	Metre	2385.5	2.49%	2444.90
ii	19.35.2	600 mm dia RCC pipes.	Metre	3051.55	2.49%	3127.53
2	DSR-21 19.6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :				
i	19.6.1	100 mm dia. R.C.C. pipe	Metre	447.25	2.49%	458.39
ii	19.6.2	150 mm dia. R.C.C. pipe	Metre	493.1	2.49%	505.38
iii	19.6.3	250 mm dia. R.C.C. pipe	Metre	811	2.49%	831.19

Schedule C						
Item rate for miscellaneous woks						
S. No	Item Reference DSR-21/ USSOR- 2019(NWR) / NS	Description of Item	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated Rate in INR
3	DSR-2021 16.90	Providing and laying tactile tile (for vision impaired persons as per standards) of size 300x300x9.8mm having with water absorption less than 0.5% and conforming to IS:15622 of approved make in all colours and shades in for outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	Sqm	1719	2.49%	1761.80
4	DSR-21 11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1: 4 (1cement: 4 coarse sand) Cost of cement is included in this item.				
i	11.26.1	25 mm thick	Sqm	1706.6	2.49%	1749.09
5	USSOR- 2019(NWR) 031110	Load testing of one or more spans of bridge as selected by the Engineer as per approved load test procedure following relevant IS/IRC/Railway codes with contractor's labour, deflection measuring instruments, loading materials, recoding and analyzing the load testing results including all lead & lift, etc. complete as				

Schedule C						
Item rate for miscellaneous woks						
S. No	Item Reference DSR-21/ USSOR- 2019(NWR) / NS	Description of Item	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated Rate in INR
		required. The rates are all inclusive and will be paid after load test is finished and girder is cleared of the kentledges/loading material etc. The load shall be 1.25 times the stipulated design load.				
i	031111	For Span design load upto 100 MT	Each	85662.09	5.78%	90613.36
ii	031112	Extra for every increase 1 MT or part thereof in the span design load capacity upto 800 MT	MT	845.81	5.78%	894.70
6	NS-1	Boring 1200 mm diameter piles using Hydraulic Rig in all kinds of strata including boulder studded soil, underground structure like channel, sewer manholes, old foundation or any other obstruction, irrespective of sub-soil water level in all conditions whether dry or under water, shoe and temporary casing pipe, if required, with contractor plant, machinery & equipment for pile boring, use of bentonite slurry including all operations, cleaning of bore holes, supplying and laying in-situ with tremie pipe M-35 RCC in piles as per approved design mix with admixtures and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all lifts & leads, having continuous agitated mixer, pumping concrete from transit mixer to site of laying including supplying & fixing form work (centering & shuttering),	Rmt	10,232.00	At par	10,232.00

Schedule C						
Item rate for miscellaneous woks						
S. No	Item Reference DSR-21/ USSOR- 2019(NWR) / NS	Description of Item	Unit	Basic Rate in INR	Add % Above for Estimate	Estimated Rate in INR
		<p>compacting, finishing, curing, chipping off pile top to remove laitance concrete above cut off level, removal and disposal of surplus excavated earth/debris/muck outside ROW including all lead, lift, ascends, descends, loading, unloading handling, re-handling, crossing of stream, nallahs, railway track, level crossing etc. with all labour, material, tools, plants, machinery and equipment, taxes, cess etc. as a complete job in accordance with the Specification and the Drawings.</p> <p>Note –</p> <p>i. Cost of cement is included in the above item.</p> <p>ii. Cost of Reinforcement steel is not included in the above item and will be paid separately under relevant item of Schedule-B.</p> <p>iii. Cost of temporary casing pipe is included in the above item. However, cost of permanent casing pipe is not included in this item and shall be paid separately under item, if required and approved by the Engineer.</p>				

Total Estimated cost of Schedule 'C'- INR 2.00 Crore (INR 20 million).