



इरकॉन इन्टरनेशनल लिमिटेड
(भारत सरकार का उपक्रम)
IRCON INTERNATIONAL LIMITED
(A Govt. of India Undertaking)
An integrated Engineering and Construction Company



No.: IRCON/R-1400028/MCL/Tender/2023/02/LOA /127

Date: 02.06.2023

M/s Shree Balaji Engicons Limited,
Belpahar (R.S), Dist.-Jharsuguada,
Odisha, Pin-768217.
Email: info @sbepl.co

Sub: Execution of earth work in formation, minor bridges, major bridges, roads, pathway, retaining wall cum drain, laying of track (B. G., 25T axle load) including supply of ballast, all permanent way materials (excluding Rails) and other miscellaneous work in connection with Development of Rail Infrastructure for proposed 02 Nos RLS (20 MTY) for Ananta OCP of Jagannath Area, MCL at modified route (i.e. through excavated de-coaled area of Ananta & Bharatpur OCP of MCL) at Talcher in the state of Odisha- **Letter of Acceptance.**

Ref: (i) Tender No.- IRCON/R-1400028/MCL/Tender/2023/ 02, Date: 14.04.2023
(ii) Corrigendum No. 1 Dated-19.04.2023.
(iii) Your bid submitted Dated- 27.04.2023.
(iv) Technical Bid opened on 28.04.2023 and Financial bid opened on 18.05.2023.

Dear Sir,

In reference to the above, it is to inform that the competent authority of Ircon International Limited has accepted your offer at the original quoted rate of 15.02% below on all the schedules with the total amount of Rs. 164,09,40,058.50 (Rupees One Hundred Sixty-Four Crore Nine Lakh Forty Thousand Fifty-Eight and Fifty Paise only) including GST for the above subjected work without any change in the tender conditions in its capacity as a Power of Attorney Holder, acting for and on behalf of M/s Mahanadi Coalfields Limited (MCL). The detail bill of quantity enclosed herewith as Annexure- I.

The important Terms and Conditions of the above tender is mentioned in brief below, however the clauses as mentioned in the tender document shall be final and binding.

1. Completion Period:

The completion period of the above work will be 12 (Twelve) months including the monsoon period from the date of issue of this letter of acceptance in line to Clause No. 9 of Special Conditions of Contract. The work has to be executed in co-ordination with other agencies working on or near the project

2. Performance Security:

You are requested to furnish Performance Security in the form of irrevocable Bank Guarantee on the Performa annexed as Annexure-II of GCC of tender document from any scheduled bank for an amount of 5% (Five percent) of the contract value i.e. Rs. 8,20,47,003.00 (Rupees Eight Crore Twenty Lakh Forty-Seven Thousand and Three

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only) in line to Clause No. 13 of Special Conditions of Contract plus additional Performance Guarantee of an amount of Rs. 4,84,67,400.00 (Rupees Four Crore Eighty-Four Lakh Sixty-Seven Thousand and Four Hundred only) in line to Clause No. 8.1 (iv) of General Conditions of Contract within 21 days from date of issue of Letter of Acceptance. This guarantee shall be initially valid upto the stipulated date of completion plus 60 days beyond that.

3. Accepted Rates and Price Variation:

The quoted rate shall be deemed to include all the cost towards the scope of work of contractor as detailed in the tender document including cost of all materials, labours plant and machinery, supervision, overhead, profit, insurances including transit insurance, replacement/correction of defective works, incidentals etc. and all the taxes and duties etc. complete. Nothing extra over the accepted rate will be payable unless noted expressly otherwise in the tender document. However, the contract price adjustment/price variation shall be dealt as per Clause No. 8 of Special Conditions of Contract.

4. Variation of Quantity:

The variation in quantities shall be dealt as per Clause No. 58 and 59 of General Conditions of Contract.

5. Mobilisation Advance:

Payment of mobilisation advance shall be as per Clause No. 03 of Special Conditions of Contract.

6. Maintenance and Defect Liability Period:

The Contractor shall maintain, rectify and make good at his own cost any defect/ deficiencies, which may develop in the work or as notified by the Engineer during Defect Liability Period of 12 months from date of completion of the work as per Clause No.10 of Special Conditions of Contract.

7. Insurance:

In term of Clause No.11 of Special Conditions of Contract, before commencement of work, you are requested to obtain insurance cover as per details provided in the clauses.

8. Contract Agreement:

In term of Clause No. 12.5 of General Conditions of Contract, you have to attend the office of General Manager, Ircon International Limited, 5th floor, OHSB Building, Sachivalaya Marg, Bhubaneswar Odisha-751001 for signing the Contract Agreement within 28 days of issue of Letter of Acceptance. Format of Contract Agreement is enclosed as Annexure-I of General Conditions of Contract. The stamp paper of requisites value as per the prevailing laws shall be provided by the contractor at his own cost. Original Agreement shall be retained by the Employer/ Engineer and certified copy shall be made available to the contractor.

9. Security Deposit/ Retention Money:

Retention money will be recovered from account/ final bill as per the Clause No. 8.2 of General Conditions of Contract.

10. You are requested to contact General Manager, Ircon International Limited, 5th Floor OSHB Building, Sachivalaya Marg, Bhubaneswar, Odisha-751001 for carrying out the contract.



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11. Conditions mentioned above in this LOA are brief reference of the term of tender document. Detailed terms and conditions shall be as per NIT, Tender documents & Corrigendum, which shall be an integral part of this contract and shall be binding on you.
12. Priority of document shall as per Clause No. 1 of Special Conditions of Contract.
13. As per Clause No. 07 of Integrity Pact (Enclosed as Annexure VI to Instructions to the Tenderer), the legal jurisdiction for this contract shall be New Delhi.
14. This letter will constitute a legal and binding contract between M/s Ircon International Limited and M/s Shree Balaji Engicons Limited, Belpahar, Odisha till such time the contract agreement is signed.
15. This letter is being issued to you in duplicate. You are requested to return one copy of this letter of acceptance duly signed & stamped on each pages by your authorised representative as a token of your acceptance.

Thanking you.

Document attached: **Bill of Quantities 24 Pages.**

Yours faithfully


(R. Panigrahi) 26/2/23

**General Manager
IRCON/ Bhubaneswar
(For and Behalf of MCL)**

Copy to:

1. General Manager/Jagannath Area, Mahanadi Coalfields Limited, P.O.: Balanda, Talcher, Dist. Angul, Odisha-759116 - for information please.
2. General Manager / Railway Siding, Mahanadi Coalfields Limited, Jagruti Vihar, Burla , Sambalpur, Odisha -768020 - for information please.
3. Executive Director (Special Works), Ircon International Limited, C-4, District Center, Saket, Delhi-110017- for kind information.
4. AGM/Civil, Ircon International Limited, MCL PMC Project.
5. Manager/Fin., Ircon International Limited, Bhubaneswar.



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BHUBANESWAR

BILL OF QUANTITY

ABSTRACT OF COST

Sl No	Type of items	Schedule No.	Description of works	Item Code	Item Qty	Qty Unit	Unit Rate (Rs.)	Adverstising Cost excluding GST (Rs.)
A	Items Covered on ECoR's USSOR -2019							
1	SOR Items	Schedule- A	Earth work in formation (USSOR-2019 Items)	Detailed in schedule-A			8,86,14,715.56	
2		Schedule- B	Bridges (Major) (USSOR-2019 Items)	Detailed in schedule-B			33,46,80,969.26	
3		Schedule- C	Bridges (Minor) (USSOR-2019 Items)	Detailed in schedule-C			43,57,71,441.72	
4		Schedule- D	Supply of Cement (USSOR-2019 Items)	Detailed in schedule-D			2,93,42,528.66	
5		Schedule- E	Supply of Reinforcement (USSOR-2019 Items)	Detailed in schedule-E			9,35,01,138.24	
6		Schedule- K	Retaining Wall cum Drain (USSOR-2019 Items)	Detailed in schedule-K			8,46,98,011.76	
B	Items Covered on DSR -2021							
1	SOR Items	Schedule- F	Construction of Road (DSR-2021 items)	Detailed in schedule-F			17,92,97,453.49	
2		Schedule- I	Construction of Pathway DSR-2021 items)	Detailed in schedule-I			2,28,16,215.82	
C	Non- SOR Items							
1	Non-SOR items	Schedule- J	Permanent Way Works and other misc. work	Detailed in schedule-J			36,76,94,527.39	
Total Estimated Cost Excluding GST (D) =								1,63,64,17,001.90
Deduct Contract Deduction @ 15.02% below as quoted by Bidder (E)=								24,57,89,833.68
Amount after contract deduction (F=D-E)=								1,39,06,27,168.22
Add GST @18% above (G)=								25,03,12,890.28
Gross Amount after GST (H)=								1,64,09,40,058.50



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Schedule-A-Earthwork in Formation

Item No.	ECOR USSOR 2019, Code No.	Description of Items	Unit	Qty.	Rate As per ECoR USSOR 2019, Excl. GST (Rs.)	Amount (Rs.)
		Schedule-A-Earthwork in Formation				
1	011010	Earthwork in cutting (classified) in formation, trolley refuges, side drains, level crossing approaches, platforms, catch water drains, diversion of nallah & finishing to required dimension and slopes to obtain a neat appearance to standard profile inclusive of all labour, machine & materials and removing & leading all cut spoils either to make spoil dumps beyond 10m from cutting edge or for filling in embankment with leads within 2 km on either side of cutting edge, lifts, ascent, descent, loading, unloading, all taxes / royalty, clearance of site and all incidental charges, bailing & pumping out water, if required, etc. complete as per directions of the Engineer-in-Charge. The work is to be executed as per latest / updated edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow. Cut trees shall be property of Railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract. {Note - (i) All usable earth arising from cut spoils shall be led into bank formation and Unusable spoils shall be dumped / stacked (ii) All hard rock /and boulders not fit for filling will be stacked by the contractor and will be property of the Railways.}				
(a)	011011	In all conditions and classifications of soil except rock	Cum	180000	121.59	2,18,86,200.00
(b)	011012	Soft rock not requiring blasting in all conditions	Cum	60000	272.07	1,63,24,200.00
(c)	011013	In hard rock requiring blasting with explosives and blasting/drilling equipment Including all incidental work in all conditions. Rate includes cost of all explosive material.	Cum	60000	435.75	2,61,45,000.00



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2	012010	Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, rain bunds, if provided, platforms etc. with earth, suitable for embankment as per RDSO latest Specifications and guidelines GE: G-14 of Soil Quality Class SQ3/SQ2/SQ1, excavated from outside railway boundary entirely arranged by the contractor at his own cost including all leads, lifts, ascents, descents, crossing of nallahs or any other obstructions. The item shall include demarcation and setting out of profile, site clearance, removing of shrubs, roots of vegetations growth, heavy grass, benching of existing slope of old bank, all handling/re-handling, spreading in layers with motor grader, bringing the moisture content to OMC, mechanical compaction to specified density and dressing of bank to final profile as a complete job. The payment shall be made as per finished profile and the rate shall include all costs including taxes, octroi, royalty etc. except for mechanical compaction which shall be paid extra under relevant item. Cut trees shall be property of railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract. Note: Filling shall be done with SQ3 quality soil. If SQ3 quality soil is not locally available then only SQ2 quality shall be allowed and if SQ2 quality is not locally available then only SQ1 quality shall be allowed.	Cum	25000	327.68	81,92,000.00
3	012040	Extra for mechanical compaction of soil in embankment with contractor's rollers of suitable capacity, type and size to achieve specified density as per specification, testing as per IS codes including cost of water, T&P, consumable and all labour as a complete job. The work is to be executed as per Latest edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow.	Cum	330000	19.92	65,73,600.00
4	013030	Felling trees of girth (measured at a height of 1m above ground level) including lead and stacking of material within 100m. Note : 1. When stumps are grubbed up in addition, the rates shall be doubled for trees cut and grubbed 2. Payment for grubbing shall only be made where specially ordered. 3. Grubbing shall be ordered only where it is essential to remove the stumps, including the roots, as per specification. 4. Grubbing shall include removal of roots of trees and saplings to a depth of 60cm below ground level or 30 cm below formation level or 15 cm below sub-grade level, whichever is lower.				
(a)	013031	Girth over 30 cm and upto 60 cm	Each	100	263.41	26,341.00
(b)	013032	Girth over 60 cm and upto 1.5m	Each	50	726.79	36,339.50
(c)	013033	Girth over 1.5m upto 3 m	Each	40	1,447.60	57,904.00
(d)	013034	Girth over 3 m	Each	30	2,425.85	72,775.50
5	013051	Turfing / planting, including all lead & lift and watering as required until properly rooted with Turfing with sods, 10cm thick and 20cm square closely laid. Note - Initially payment of only 40% will be made. Balance 60% will be paid only after 3 months of maintenance period, if the turfing is properly rooted.	Sqm	40000	66.51	26,60,400.00
Total as per ECoR USSOR 2019 excluding GST						8,19,74,760.00
Add price escalation @ 8.10%						66,39,955.56
Total Estimated Cost of Schedule-A						8,86,14,715.56



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Schedule-B- Major Bridges

Item No.	ECoR USSOR 2019, Code No.	Description of Items	Unit	Qty.	Rate As per ECoR USSOR 2019, Excl. GST (Rs.)	Amount (Rs.)
		B-1: Substructure				
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 in charge. 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.				
(a)	022011	All kinds of soils	Cum	337.00	154.88	52,194.56
(b)	022012	Ordinary rock	Cum	72.50	321.83	23,332.68
(c)	022014	Hard rock (blasting prohibited)	Cum	72.50	889.04	64,455.40
2	022030	Providing and laying in position Plain cement concrete of specified Nominal Mix for miscellaneous works like side drains, foundation for OHE masts and other miscellaneous structures excluding the cost of Cement, centering and shuttering - All work up to plinth level				
(a)	022031	1:1½:3 (1 Cement: 1½ coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size)	Cum	165.00	2,853.03	4,70,749.95
(b)	022032	1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)	Cum	100.00	2,959.36	2,95,936.00
3	022040	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 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.	Cum	2313.50	3,015.50	69,76,359.25



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4	022050	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 for the following Reinforced cement concrete structural elements up to height of 10 m from foundation top level, 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, shuttering shall be paid extra.				
(a)	022051	Abutment & Pier	Cum	2120.00	3,317.05	70,32,146.00
(b)	022052	Wing wall and Return wall	Cum	1835.00	3,317.05	60,86,786.75
(c)	022053	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	Cum	250.00	3,467.83	8,66,957.50
(d)	022054	Approach slab at formation level, Dirt wall/ ballast wall at formation level	Cum	1027.00	3,166.28	32,51,769.56
(e)	022055	Extra for every increase of 1m or part thereof in the height above 10 m	Cum	862.18	67.06	57,817.79
5	022090	Providing, driving and installing Bored cast in-situ Reinforced Cement Concrete piles using Hydraulic piling Rig of specified diameter and length below pile cap of specified grade Design Mix Cement Concrete, using 20mm graded crushed stone aggregate and coarse sand of approved quality, to carry a safe working load not less than specified, excluding the cost of permanent casing pipe and length of pile to be embedded in pile cap etc. complete, concreting by machine batching, machine mixing, scaffolding, using Admixture in approved proportion (as per IS:9103), placing with tremie pipe, chipping off of pile top to remove laitance concrete above cut off level etc., pumping and bailing out water with all labour material complete including crossing of tracks if required, as per approved drawing, specification and direction of the Engineer in charge. Length of the pile for payment shall be measured upto the bottom of pile cap excluding the mud mat. Payment for cement, permanent casing pipe (if any) & reinforcement shall be paid extra.				
(a)	022092	1200mm diameter	Metre	3848.00	8,794.46	3,38,41,082.08
6	022100	Providing, fabricating and installing permanent casing pipe for bored piles for all diameters with specified thickness of steel plate including all labour, materials, pumping and bailing out water wherever required, complete as per technical specifications as directed by Engineer in charge. This will include the weight of plate only and no cognizance will be given for the fittings, i.e.rivets and welding etc.	MT	143.00	81,505.43	1,16,55,276.49
7	022110	Extra for chiselling in addition to boring of piles, if chiselling is resorted to in hard rock or big stone boulders larger than 30cm depth by any means, i.e. by chisel or manual chisel and hammer method				
(a)	022111	1200mm diameter pile	Metre	468.60	3,616.16	16,94,532.58
8	022120	Conducting load testing of a single pile upto following capacity in accordance with IS:2911 (Part-IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. with all labour, material, tool & plants, equipment, machinery, etc. complete as per drawing and specification, as directed by the Engineer				
(a)	022123	Initial load test above 100 ton capacity upto 250 ton capacity pile	Each	6.00	80,888.48	4,85,330.88



(b)	022124	Extra for every increase of 50 ton in pile capacity or part thereof over 250 ton	Each	6.00	6,710.59	40,263.54
©	022127	Routine Load Test above 100 ton capacity upto 250 ton capacity pile	Each	6.00	51,388.15	3,08,328.90
9	022130	Lateral load testing of single pile in accordance with "IS Code of practice IS:2911 (Part-IV) for determining safe allowable lateral load of pile" with all labour, material, tool & plants, equipment, machinery, etc complete as per drawing and specification as directed by the Engineer				
(a)	022131	Piles with lateral load capacity of upto 50 ton	Each	6.00	18,784.88	1,12,709.28
10	022140	Pulse Echo Test (PET) for integrity testing of piles with contractor's men, materials and machines. The rate includes cost of Inspection of site, preparation of pile head and any other unforeseen cost required for the test, submission of reports in triplicate as per satisfaction of the Engineer in Charge at site.	Each	6.00	2,787.37	16,724.22
11	025030	Centering and shuttering including strutting, propping etc. and removal of form for :				
(a)	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	sqm	11581.93	546.61	63,30,798.76
(b)	025032	All types of bridge super-structures, e.g. slabs, I-girders, T-girders, Box girders etc. upto 5m above ground level	Sqm	2253.00	709.58	15,98,683.74
(c)	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	Sqm	2253.00	86.60	1,95,109.80
12	022070	Providing and fixing Weep Holes in Abutments, Wing walls and Return walls etc., of new bridges with 110mm dia UPVC pipe Type A ISI marked with all contractor's men, material, transportation, all taxes as per specifications and as directed by Engineer-in-Charge.	Metre	2061.00	180.90	3,72,834.90
13	051060	Providing and laying Pitching with Stone Boulders, weighing not less than 35kg each with voids filled with spalls on slopes, laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical Specifications (filter media to be paid separately under the relevant item)	Cum	1551.00	2,217.99	34,40,102.49
14	051070	Providing and laying Pitching with Stone Boulders, weighing not less than 35kg each with voids filled with cement sand mortar 1:4 on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical Specifications (filter media to be paid separately under the relevant item). Rate is excluding cost of cement which shall be paid extra under relevant item.	Cum	1000.00	3,488.63	34,88,630.00
15	051030	Supplying of stone boulders weighing not less than 35 kg each at specified bridge locations	Cum	691.00	1,134.86	7,84,188.26
16	052270	Providing Boulder Backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra.	Cum	691.00	393.33	2,71,791.03
17	025020	Providing and applying two coats of coal tar or bitumen conforming 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	sqm	2647.00	121.63	3,21,954.61



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18	052260	Supplying, spreading and filling coarse sand (no cohesive materials to be used) of approved quality including watering and ramming in foundation, plinth, behind the abutment, wing wall, retaining wall in layers not exceeding 150mm thick including its compaction as per direction of Engineer-in-charge. The rate includes all lead, lift, ascent, descent, crossing of Railway line etc. complete with contractor's labour, materials, tools and plant.	Cum	1344.00	1,485.75	19,96,848.00
		Superstructure : RCC				
19	031010	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 cast in-situ Prestressed (Post tensioned) concrete girder / Box girders for different spans 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 in-charge. Payment for Shuttering, Cement, reinforcement, HTS cables, sheathing, anchorage cones, stressing of cables and grouting of the ducts will be done extra under relevant items.(N. B. This item is, for Deck Slab of Composite Girder).				
(a)	031011	With Soffit level upto 9m above Bed level	Cum	403.00	3,082.57	12,42,275.71
(b)	031012	With Soffit level From 9m above Bed Level to 12m above Bed Level	Cum	50.00	3,283.76	1,64,188.00
(c)	031015	Deduct for casting of Slab in place of Girders (for any heights)	Cum	403.00	-33.54	-13,516.62
20	031090	Design, manufacturing, supplying and fixing in position elastomeric bearing true to line and level conforming to IS:3400, IS:226, BS-5400 under prestressed concrete girders/ Steel Girders, for Pre-cast as well as cast-in-situ girders as per approved drawing. The rate shall include cost of load test of one no. bearing from Railway approved firms and all fixing materials, equipments, machineries, labour, taxes, loading, unloading, leading, lifting etc. complete. Rates include getting the drawing approved from Railway and cost of inspection during manufacturing from railway approved organization. (Note : 1. The rate is for finished item complete and paid only after fixing in position below the girder. 2. The volume shall be given in the drawing and no deduction shall be made for inserted steel plates etc.)	Cu Cm	806160.00	1.40	11,28,624.00
21	052160	Providing and fixing of Drainage Spouts of 110mm UPVC Type A ISI marked (Working pressure 4 kg/sqcm) using suitable clamps and adhesive etc., complete.	Metre	141.16	274.49	38,747.01
22	031100	Providing and fixing in position of standard preformed sealed and slab type or strip seal elastomeric type expansion joints for Railway bridge or Road Over Bridges as per approved drawings and latest MOST/IRC specifications. The rates are inclusive of supplying, fixing with contractor's own materials, e.g. inserts, bolts, socket tubes, Neoprene sheet/cap etc., equipments, machineries, labour, all taxes, royalty, all lead & lifts, transport, testing, surface preparations, complete				
(a)	031102	For 80mm expansion	Metre	106.00	7,416.45	7,86,143.70



23	041050	Metalizing of steel work of girders with sprayed aluminium after surface preparation by Sand/grit blasting, followed by one coat of etch primer (IS:5666) & one coat of Zinc Chrome primer (IS:104) and two coats of aluminium paint (IS:2339) with all labour, T&P and material as a complete job duly conforming to all relevant specifications and process given under Clause 39 of IRS-B1-2001 Note: Nominal Thickness of Aluminium coating shall be 150 microns. DFT of Zinc chrome primer shall be 25-30 microns and DFT of each coat of Aluminium paint shall be 12-14 microns.	Sqm	1948.54	770.75	15,01,837.21
		B-2: Superstructure : Steel				
24	041020	Supplying, fabrication, assembling of all types of steel Composite girders of specified spans with structural steel conforming to Quality "B0" Grade Designation E250 conforming to IS:2062, erection / slewing / end launching of steel girders with cranes or any other approved launching methods as per site conditions on sub-structure including provision of stud bolts / shear connectors, complete as per approved QAP and drawings conforming to IRS-B1-2001 and other relevant codes and specifications. Note: 1. Detailed fabrication and erection drawings & launching methodology will be prepared by the contractor and got approved from Railway. 2. Rate includes fabrication of all types of battens, bracings, ties, stiffeners, packing, diaphragms, shop rivets / welding, T&F bolts, drifts, SAW, templates, jigs, fixtures, accessories, transporting various components from fabrication shop to site including loading & unloading, assembly of girders with drifts/bolts, field riveting /welding /HSFG Bolting, assembling of temporary support for side slewing, raising of girders to the bed block level, providing sliding arrangements and slewing the girder in position, lowering of girder on bearings and bed plates with all temporary arrangements or any other method of launching complete. 3. The bearing sets to be provided with-the girders will be paid separately as per relevant item. 4. Payment for addition in weight for rivets / welds shall be made as per clause 45 of IRS B-1-2001. 5. In case of composite work (welding and HSFG bolts), addition in weight shall be 1% for welding and HSFG bolts shall be paid separately under relevant item. 6. Painting of girders will be paid separately under relevant item.				
(a)	041021	Composite steel girder of span length up to 36.0m	MT	448.60	1,09,384.69	4,90,69,425.01
		Steel reinforcement				0.00
25	025070	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete				
(a)	025072	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	1575420	75.20	11,84,71,584.00
		Supply of Cement				
26	025062	Supply and using Cement at Worksite: Ordinary Portland Cement 53 grade	MT	1000.00	8,218.76	82,18,760.00
27	025063	Supply and using Cement at Worksite: Pozzolana Portland Cement	MT	5230.00	7,048.06	3,68,61,353.80
Total as per ECoR USSOR 2019 excluding GST						30,96,03,116.80
Add price escalation @ 8.10%						2,50,77,852.46
Total Estimated Cost of Schedule-B						33,46,80,969.26



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Schedule-C- Minor Bridges

Item No.	ECOR USSOR 2019, Code No.	Description of Items	Unit	Qty.	Rate As per ECoR USSOR 2019, Excl. GST (Rs.)	Amount (Rs.)
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 in charge. 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				
(a)	022011	All kinds of soils	Cum	19000	154.88	29,42,720.00
(b)	022012	Ordinary rock	Cum	2000	321.83	6,43,660.00
(c)	022014	Hard rock (blasting prohibited)	Cum	0	889.04	0.00
2	022030	Providing and laying in position Plain cement concrete of specified Nominal Mix for miscellaneous works like side drains, foundation for OHE masts and other miscellaneous structures excluding the cost of Cement, centering and shuttering - All work up to plinth level.				
(a)	022031	1:1½:3 (1 Cement: 1½ coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size)	Cum	2500	2,853.03	71,32,575.00
(b)	022032	1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)	Cum	1000	2,959.36	29,59,360.00
3	024020	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 Drop and curtain wall and alike structures below bed level, including centering, shuttering and finishing complete as per drawings and technical specifications as directed by Engineer. Payment for cement, reinforcement and shuttering shall be made extra.	Cum	727	3,015.50	21,92,268.50
4	024010	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete of specified grade (Cast in- Situ/Pre-cast) in bottom/top slab, side walls, toe wall and sumps haunch filling head walls or any other component using 20mm graded crushed stone aggregate and coarse sand of approved quality of RCC box of any size including finishing, 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 in charge. Payment for cement, reinforcement and shuttering shall be made extra.	Cum	19000	3,317.05	6,30,23,950.00



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5	025030	Centering and shuttering including strutting, propping etc. and removal of form for :				
(a)	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	sqm	36350	546.61	1,98,69,273.50
(b)	025033	Extra for additional height over Item No. 5 (a) above, wherever required with adequate bracing, propping etc. over initial height of 5 metres for every additional height of 1 metre or part thereof	Sqm	200	86.60	17,320.00
6	022070	Providing and fixing Weep Holes in Abutments, Wing walls and Return walls etc., of new bridges with 110mm dia UPVC pipe Type A ISI marked with all contractor's men, material, transportation, all taxes as per specifications and as directed by Engineer-in-Charge.	Metre	800	180.90	1,44,720.00
7	051030	Supplying of stone boulders weighing not less than 35 kg each at specified bridge locations	Cum	6750	1,134.86	76,60,305.00
8	052270	Providing Boulder Backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra.	Cum	6750	393.33	26,54,977.50
9	052260	Supplying, spreading and filling coarse sand (no cohesive materials to be used) of approved quality including watering and ramming in foundation, plinth, behind the abutment, wing wall, retaining wall in layers not exceeding 150mm thick including its compaction as per direction of Engineer-in-charge. The rate includes all lead, lift, ascent, descent, crossing of Railway line etc. complete with contractor's labour, materials, tools and plant.	Cum	5000	1,485.75	74,28,750.00
10	025020	Providing and applying two coats of coal tar or bitumen conforming 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	sqm	20000	121.63	24,32,600.00
11	051060	Providing and laying Pitching with Stone Boulders, weighing not less than 35kg each with voids filled with spalls on slopes, laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical Specifications (filter media to be paid separately under the relevant item)	Cum	1000	2,217.99	22,17,990.00
12	051070	Providing and laying Pitching with Stone Boulders, weighing not less than 35kg each with voids filled with cement sand mortar 1:4 on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical Specifications (filter media to be paid separately under the relevant item). Rate is excluding cost of cement which shall be paid extra under relevant item.	Cum	1000	3,488.63	34,88,630.00
13	025062	Supply and using Cement at Worksite: Ordinary Portland Cement 53 grade	MT	1000	8,218.76	82,18,760.00
14	025063	Supply and using Cement at Worksite: Pozzolana Portland Cement	MT	9300	7,048.06	6,55,46,958.00
15	025072	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete: Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	2720000	75.20	20,45,44,000.00
Total as per ECoR USSOR 2019 excluding GST						40,31,18,817.50
Add price escalation @ 8.10%						3,26,52,624.22
Total Estimated Cost of Schedule-C						43,57,71,441.72



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Schedule-D-Supply of cement

Item No.	ECoR USSOR 2019, Code No.	Description of Items	Unit	Qty.	Rate As per ECoR USSOR 2019, Excl. GST (Rs.)	Amount (Rs.)
		Schedule-D-Supply of cement				
1	025062	Supply and using Cement at Worksite: Ordinary Portland Cement 53 grade	MT	730	8,218.76	59,99,694.80
2	025063	Supply and using Cement at Worksite: Pozzolana Portland Cement	MT	3000	7,048.06	2,11,44,180.00
Total as per ECoR USSOR 2019 excluding GST						2,71,43,874.80
Add price escalation @ 8.10%						21,98,653.86
Total Estimated Cost of Schedule-D						2,93,42,528.66



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Schedule-E-Supply of Reinforcement Steel

Item No.	ECOR USSOR 2019, Code No.	Description of Items	Unit	Qty.	Rate As per ECoR USSOR 2019, Excl. GST (Rs.)	Amount (Rs.)
		Schedule-E -Supply of Reinforcement				
	025072	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	1150200	75.20	8,64,95,040.00
Total as per ECoR USSOR 2019 excluding GST						8,64,95,040.00
Add price escalation @ 8.10%						70,06,098.24
Total Estimated Cost of Schedule-E						9,35,01,138.24



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Schedule-K - Construction of Retaining wall cum drain

Item No.	ECoR USSOR 2019, Code No.	Description of Items	Unit	Qty.	Rate As per ECoR USSOR 2019, Excl. GST (Rs.)	Amount (Rs.)
1	022011	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 in charge. All kinds of soils 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	Cum	44100	154.88	68,30,208.00
2	012010	Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, rain bunds, if provided, platforms etc. with earth, suitable for embankment as per RDSO latest Specifications and guidelines GE: G-14 of Soil Quality Class SQ1, excavated from outside railway boundary entirely arranged by the contractor at his own cost including all leads, lifts, ascents, descents, crossing of nallahs or any other obstructions. The item shall include demarcation and setting out of profile, site clearance, removing of shrubs, roots of vegetations growth, heavy grass, benching of existing slope of old bank, all handling/re-handling, spreading in layers with motor grader, bringing the moisture content to OMC, mechanical compaction to specified density and dressing of bank to final profile as a complete job. The payment shall be made as per finished profile and the rate shall include all costs including taxes, octroi, royalty etc. except for mechanical compaction which shall be paid extra under relevant item. Cut trees shall be property of railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract.	Cum	16380	327.68	53,67,398.40
3	024020	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 Drop and curtain wall and alike structures below bed level, including centering, shuttering and finishing complete as per drawings and technical specifications as directed by Engineer. Payment for cement, reinforcement and shuttering shall be made extra.	Cum	735	3,015.50	22,16,392.50



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4	024010	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete of specified grade (Cast in- Situ/Pre-cast) in bottom/top slab, side walls, toe wall and sumps haunch filling head walls or any other component using 20mm graded crushed stone aggregate and coarse sand of approved quality of RCC box of any size including finishing, 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 in charge. Payment for cement, reinforcement and shuttering shall be made extra.	Cum	7634	3,317.05	2,53,22,359.70
5	025031	Centering and shuttering including strutting, propping etc. and removal of form for : 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.	Sqm	34024	546.61	1,85,97,858.64
6	025033	Extra for additional height over Item No. 5 above, wherever required with adequate bracing, propping etc. over initial height of 5 metres for every additional height of 1 metre or part thereof	Sqm	200	86.60	17,320.00
7	ECoR USSOR 2019.	Any other items not covered under Schedule-A, B, C, D, E, J & K but may be required to be executed as per ECoR USSOR 2019. (Note:-During the payment of rate for the executed items of ECoR's USSOR-2019 under item No.-7 of Schedule- K, the following Procedure should be adopted. For example, if the rate of individual items of ECoR's USSOR-2019 = y, The rate for payment will be considered = $(y / 112 \times 100)$ (Without GST). The GST will be paid separately).	L. S.	1	2,00,00,000.00	2,00,00,000.00
Total as per ECoR USSOR 2019 excluding GST						7,83,51,537.24
Add price escalation @ 8.10%						63,46,474.52
Total Estimated Cost of Schedule-K						8,46,98,011.76



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SCHEDULE-F - Construction of Road Works

Item No.	DSR 2021 Code No.	Description of Items	Unit	Qty.	Rate As per DSR 2021, Excl. GST (Rs.)	Amount (Rs.)
1	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm. depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.	Sqm	65206	161.16	1,05,08,598.96
2	16.3	Supplying and stacking at site.				
(a)	16.3.1	90 mm to 45 mm size stone aggregate.	Cum	9325	1,730.00	1,61,32,250.00
(b)	16.3.2	63 mm to 45 mm size stone aggregate.	Cum	6980	1,450.45	1,01,24,141.00
(c)	16.3.3	53 mm to 22.4 mm size stone aggregate.	Cum	6980	1,640.40	1,14,49,992.00
(d)	16.3.6	Stone screening 13.2 mm nominal size (Type A).	Cum	2930	1,665.18	48,78,977.40
(e)	16.3.7	Stone screening 11.2 mm nominal size (Type B).	Cum	1100	1,844.38	20,28,818.00
(f)	16.3.10	Moorum.	Cum	5200	793.13	41,24,276.00
3	16.4	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/ vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density.	Cum	16300	773.04	1,26,00,552.00
4	16.25	Surface dressing on new surface with paving bitumen of grade VG -10 of approved quality using 2.25 kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface including consolidation with road roller of 6 to 8 tonne capacity etc. complete:	Sqm	65206	159.06	1,03,71,666.36
5	16.30	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 :				
(a)	16.30.1	On W.B.M. @ 0.75 Kg / sqm.	Sqm	65206	40.36	26,31,714.16
(b)	16.30.2	On bituminous surface @ 0.50 Kg / sqm.	Sqm	65206	32.68	21,30,932.08
6	16.54.1	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge. 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @5% (percentage by weight of total mix) and lime filler @ 2% percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	4891	8,940.45	4,37,27,740.95



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7	16.39.1	4 cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% with 12.5mm nominal size and 40% with 10mm nominal size) @2.60cum per 100 sqm and coarse sand @ 2.60cum per 100 sqm of road surface and with bitumen @ 56 kg/cum. of stone chippings and at 128kg/cum of sand over a tack coat with hot straight run bitumen including consolidation with road roller of 8 to 10 tonne etc. complete. (tack coat to be paid separately) : With paving Asphalt grade VG- 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt.	Sqm	65206	381.92	2,49,03,475.52
Total cost as per DSR 2021						15,56,13,134.43
Add price escalation @ 15.22%						2,36,84,319.06
Total Estimated Cost of Schedule- F						17,92,97,453.49



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Schedule-I - Construction of 750 m x 2 m wide pathway (4 Nos)

Item No.	DSR 2021 Code No.	Description of Items	Unit	Qty.	Rate As per DSR 2021, Excl. GST (Rs.)	Amount (Rs.)
1	2.8.1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil.	Cum	1800	256.12	4,61,016.00
2	4.1.6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:3:6 (1 Cement : 3 coarse sand(zone-III) derived from natural sources : 6 graded stone aggregate 40 mm nominal size derived from natural sources).	Cum	1200	5,955.58	71,46,696.00
3	5.1.3	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size derived fro natural resources)	Cum	900	7,094.33	63,84,897.00
4	5.9.1	Centering and shuttering including strutting, propping etc. and removal of form for : Foundations, footings, bases of columns, etc. for mass concrete.	Sqm	2450	274.96	6,73,652.00
5	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.	Cum	600	226.74	1,36,044.00
6	CPWD DSR 2021	Any other items not covered under Schedule-F, G & I but may be required to be executed as par CPWD DSR 2021 (Note: - During the payment of rate for the executed items of CPWD DSR-2021 under item No.6 of Schedule-I, the following procedure should be adopted. For example, if the rate of individual items of CPWD DSR 2021 = x, the rate for payment will be considered = (x / 112 X 100) (Without GST). The GST will be paid separately)	L. S.	1	50,00,000.00	50,00,000.00
Total cost as per DSR 2021						1,98,02,305.00
Add price escalation @ 15.22%						30,13,910.82
Total Estimated Cost of Schedule-I						2,28,16,215.82



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SCHEDULED - J - Permanent Way works (excluding rails)

Item No.	Description of Items	Unit	Qty.	Rate Excl. GST (Rs)	Amount (Rs.)
	Supply of PSC Sleepers (J-2)				
1	Supply of 60 Kg prestressed monoblock concrete sleepers (wider) as per RDSO Drawing No. RT-8527 with latest alteration /amendments, if any, leading, loading, unloading and stacking as per IRPWM all along both sides of the siding alignment or as direct by the Engineer-in-charge.	Each	16800	3,368.78	5,65,95,504.00
2	Supply of curved PSC Sleepers as per RDSO Drawing No. RT-8621 to RT-8624 with latest alteration/ammendment if any leading ,loading & unloading and stacking as per IRPWM all along both sides of the siding alignment or as direct by the Engineer-in-charge.	Each	8900	3,451.34	3,07,16,926.00
3	Supply of Level Crosing Sleepers (Wider) as per RDSO Drawing No. RT-8226 with latest alteration/ammendment if any.	Each	0	3,451.34	0.00
4	Supply of 60Kg BG turn out PSC sleepers(category-1) for 1 in 8½ as per RDSO Drg No. RT-4865 (RT4793 to 4844 & RT-4512) including entry and exit sleepers with up to date alteration if any and as per IRS specification, leading, loadng, unloading and stacking as per IRPWM all along both sides of the siding alignment or as direct by the Engineer-in-charge.	Set	37	4,54,129.18	1,68,02,779.66
5	Supply of 60Kg PSC guard rails sleepers over bridge and at bridge approach (for 60 Kg running and 60 Kg guard rail) at the work site as per RDSO standard drawing No. T 8672. The rate includes all charges all loading, unloading, transportation with all lead, ascent, descent, handling, rehandling etc complete in all respect as per specification & direction of EIC.	Each	236	3,451.34	8,14,516.24
6	Supply of 60Kg PSC sleepers at bridge approaches of tapered guard rail location (for 60 Kg running and 60 Kg guard rail) at the work site. As per RDSO standard drawing No. T 8673 to 8680. The rate includes all charges all loading, unloading, transportation with all lead, ascent, descent, handling, rehandling etc complete in all respect as per specification & direction of EIC. (One set = 8 types of sleepers)	Set	10	30,981.77	3,09,817.70
7	Supply of 60 Kg PSC sleepers(category-1) for 1 in 8½ derailing switches including approach & exit sleepers at site as per RDSO Drg No. 6068 with up to date alteration if any and as per IRS specification, leading, loadng, unloading and stacking as per IRPWM all along both sides of the siding alignment or as direct by the Engineer-in-charge.	Set	2	1,24,621.00	2,49,242.00
	Part 3- Supply of P Way Fittings (J-3)				
8	Supply of 60 kg (UIC) 1 in 8½ (1673 fan shaped) BG turnout with using 1st quality rails as per IRS-T-12 with over riding curved switches 6400 mm (RDSO Drawing No. T-4965, 4966, 4967) and CMS Crossing and as per Drawing No. RDSO/T-4967/in position using 1000 mm long fish plates to RDSO Drg No. T-5916 including stanard Check Rails, Lead Rails, Elastic Rail Clips, Grooved Rubber Pads, Metal Liners, Distance Blocks, Heel Blocks, MS Bearing Plates, Fish Bolts with Nuts and washers, Stretcher Bars, Brackets etc. and all other fittings required for complete set of Turnout as mentioned in the RDSO drawing with alteration if any.	Set	37	9,18,739.86	3,39,93,374.82



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9	Supply of 60 kg (UIC) BG (1673) 1 in 8½ Derailing Switch (trap point) as per RDSO Drawing including Elastic Rail Clips, Grooved Rubber Pads, Metal Liners, Distance Blocks, Heel Blocks, MS Bearing Plates, Fish Plates, Fish Bolts with Nuts and washers, Stretcher Bars, Brackets etc. and all other fittings required for complete set of Derailing Switch as mentioned in the RDSO drawing with alteration if any.	Set	2	2,63,623.25	5,27,246.50
10	Supply of Composite Grooved Rubber Sole Plates 10 mm thick as per RDSO Drawing No.RT-8528 Conforming with latest alteration/ amendments if any.	Each	51400	70.31	36,13,934.00
11	Supply of Elastic Rail Clips mark V flat toe for BG track with 60 Kg Rail and 60 Kg PSC Sleepers to RDSO Drg. No. RT-5919 Conforming to IRS Specification T-31/2018 with latest alteration/amendments if any to suit to 60 Kg wider sleeper to RDSO Drg. No. RT-8527, RT-8624, RT-8671 with latest alteration/amendment if any.	Each	94000	59.06	55,51,640.00
12	Supply of Elastic Rail Clips (J type) mark III flat toe for fishplated joint of BG track with 60 Kg Rail and 60 Kg PSC Sleepers to RDSO Drg. No.RT-8258 Conforming to IRS Specification T-31/92 and/or any other to suit to 60 Kg wider sleeper to Drg. No. RT 8527, RT-8624, RT-8671 with latest alteration/amendments if any.	Each	11800	63.75	7,52,250.00
13	Supply of 52 Kg fish plates (610 mm long) for 52 Kg Rails, RDSO Drg. No. T-5916 with latest amendment, if any including nuts, bolts and washers etc.(1 Set=2 Nos of fish plates, 4 sets of Bolts and Nuts).	Set	0	3,371.00	0.00
14	Supply of Fish Plates 60 Kg as per RDSO Drg. No.T-1898(M) 610 mm long & to IRS specification No.T1/66 with 25 mm x 160 mm size Bolts and Nuts with washers of required number for each pair of fish plates as per Drg. No.T-1899 and IRS specification No.T-23/67 with latest amendments. (1 set=2 Nos of fish plates, bolts and nuts).	Set	1080	2,746.44	29,66,155.20
15	Supply of Combination Fish Plates 60 Kg as per RDSO Drg. No.T-696 & T-699 to IRS specification No. T 1/66 with Fish bolt and nut as per RDSO Drg. No.T 700 size bolts of required number with nuts & washers with latest amendments.(1 set =LH & RH = 4 Nos of fish plates, bolts and nuts)	Set	5	11,249.88	56,249.40
16	Supply and fixing of Joggled fish plate for 60 kg AT Weld as per Drg.No. T-5849(Alt-1) with 04 Bolts, nuts and washers, Drilling holes of 32 mm dia. with Rail drilling machine in 60 kg rail section including all consumable, Chamfering of drilled hole as per RDSO's specification for all types of rails, including all lead, lift ,loading/unloading, plant, machineries etc. complete as directed by Engineer in-charge.	Set	50	5,062.83	2,53,141.50
17	Supply of MS Liner for 60 Kg rail on 60 Kg PSC Sleepers (wider) as per RDSO Drg. No. T-8616 & 8617 Conforming to IRS Specification with latest alteration/amendments if any.	Each	94000	25.31	23,79,140.00
18	Supply of MS Cut liner for 60 kg rail on 60 kg PSC sleeper as per RDSO Drawing No. T-3740 conforming to IRS specification and/or any other to suit to 60 kg wider sleeper to Drg. No. RT-8527, RT-8624, RT-8671 with latest alteration/amendments if any.	Each	11800	20.62	2,43,316.00
19	Supplying of Adjustable Hand Lever Box with Pulling Rods and handles with plunger locks as per RDSO Drg. No. MA-3040 with upto date Alteration/ammendments if any, conforming to IRS specification for Turnouts & Derailing switches.	Each	39	16,801.95	6,55,276.05
20	Supply of CI brackets for fixing check rail to curved sleepers to 60 kg, RT-4186 including Lugs, washers, bolts and nuts complete all fittings. (set includes bracket, lug, nut and bolt, 2 nos. plate screws etc.) (1 set =1 No. per sleeper)	Set	8900	984.25	87,59,825.00
	Part 4-Supply of Track Ballast (J-1)				



21		Supplying & stacking of machine crushed clean, hard, angular and durable stone track ballast conforming to latest IRS/RDSO specifications and stacking ballast 50 mm size (65mm to 20mm well graded) conforming to latest RDSO Track Ballast specifications (2004) & with latest corrections /amendments etc. stacking of ballast to be done along the alignment at toe or near toe of the embankment or cutting or any suitable designated places as advised /directed by Engineer-in-charge. The rate includes supply, levelling the stacking area/space, supply the ballast, labour, tools, all types of transportation, unloading, stacking leads, lifts, handling, rehandling, ascends, descends, crossing of tracks and any other obstructions etc. sieves analysis charge for testing the quality of ballast at the reputed labs, all taxes (except GST), royalty, cess & seniorages etc. No deduction will be made on stack measurement for shrinkage as specified in technical specification.	Cum	48000	1,835.68	8,81,12,640.00
	J-3	Part 5- Laying & linking Works (J-4)				
22		Leading and spreading of stone ballast by head/trolley/ tractor/ dumper or any other means from the stacks available at the ballast depot/on cess/formation/toe of the formation to the top of the formation and spreading the same on the formation and dumping the required balance quantity on side to enable to fill between the Sleepers and to do dressing to obtain a compact and uniform specified profile as directed by the Engineer-in-charge. The rate includes all taxes (except GST), loading , unloading, ascent, descent, lift, labour, tools, crossing of one or more railway lines if required . The cost of rolling will be paid separately vide item No. 23 below.	Cum	48000	249.08	1,19,55,840.00
23		Rolling of spreaded stone ballast with contractor's power driven roller of capacity 5 Tonne or above with minimum three passes in a width of about 4.72m to 5.0 m or as directed by Engineer in-charge to obtain a compact and uniform level surface of ballast spreaded vide item No.22 above.	Sqm	75000	3.03	2,27,250.00
24		Laying & linking of fishplated or SWR BG straight or curved track with 60/52 kg rail section during traffic block or without traffic block and concrete sleeper with sleeper density 1660 per km with standard fittings ensuring correct spacing of sleepers fixing & tightening of fish bolt & nuts and maintaining proper gauge, alignment, level (both cross & longitudinal) expansion gap at rail joints superelevation where necessary and with one round initial through packing. The rate should be inclusive of transportation of rails from IRCON /MCL stocking points/stores to site of work as required, cutting of rails as required on straight and curve track for squaring of joints drilling holes on web using proper template for fish plated joints, chamfering of drilled holes, greasing and oiling of fish plates & fish bolts and nuts and at fishing zone of the rail ends including supply of grease oil etc.maintaining of sleeper spacing, versine, superelevation etc. shall also be marked by the contractor with yellow and black paint at his own cost.The work has to be carried out as laid down in IRPWM and as per direction of the Engineer-in-charge at site. The unit of track metre consists both side rails, sleepers and all other fittings required thereof.	Track Metre	15500	304.68	47,22,540.00



25		Assembling laying and linking of 60 kg B. G. point & crossing during traffic block or without traffic block including intermediate portion of track with PSC layout to the Railway's specification. Rate includes giving pre curvature to stock and tounge rail with hydraulic jim crow if required, leveling, fixing side chairs, bearing plates, fixing of one set of points and crossing with straight or curved switches, strecher bars, switch anchors, any other safety fitting including fixing of junction fish plates and ponits & crossing fittings are required as ordered by EIC. The rate includes all lead and lifts of P-Way materials consisting of rails crossing switches, PSC sleepers, turn out keys and all sorts of fittings etc to be brought to the location from any where with in the yard limits crossing railways lines etc complete as required. Nothing extra is payable for the works executed in running lines under blocks. 1 in 8½ points & crossing on 60 kg PSC sleepers layout. Layout includes approach & exit sleepers of the set.				
(a)		Under traffic block	Set	12	59,837.54	7,18,050.48
(b)		Without traffic block	Set	25	48,062.28	12,01,557.00
26		Assembling laying and linking of 60 kg (UIC) BG (1673) 1 in 8½ Derailing Switch (trap point) as per RDSO Drg. No. T/6068 for 60 Kg rail Fan Shaped PSC sleepers (22 Nos), Elastic Rail Clips, Grooved Rubber Pads, Metal Liners, Distance Blocks, Heel Blocks, MS Bearing Plates, Fish Plates, Fish Bolts with Nuts and washers, Stretcher Bars, Brackets etc. and all other fittings required for complete set of Derailing Switch as mentioned in the RDSO drawing/with alteration if any and including initial and three round through packings, oiling and greasing of derailing switch as per IRPWM, to make it fit for normal sectional speed and as directed by EIC.	Set	2	40,761.90	81,523.80
27		Through packing of plain Track /curved track in all kinds of sleepers with stone ballast to maintain correct alignments cross and lognitudinal levels as required, by maintaining track gauge, versine, superelevation etc.on both straight and curve track laid as per IRPWM, with all contractor's tools and labour, the rate is inclusive of all charges as per IRPWM and as directed by engineer-in-charge.				
i)		First through packing	Track Metre	15500	42.19	6,53,945.00
ii)		Scecond through packing	Track Metre	15500	37.50	5,81,250.00
iii)		Third through packing	Track Metre	15500	37.50	5,81,250.00
28		Through packing of 1 in 8½ Turn out on PSC sleepers with stone ballast to maintain correct alignments cross and lognitudinal levels as required, by maintaining track gauge, versine, superelevation etc.on both straight and curve track laid with all contractor's tools and labour, inclusive of all charges (Note - length of turn out will be considered from center of 1st approach sleeper to the center of 4th exit sleeper).				
i)		First through packing	Set	37	8,773.96	3,24,636.52
ii)		Scecond through packing	Set	37	8,305.22	3,07,293.14
iii)		Third through packing	Set	37	8,305.22	3,07,293.14
29		Manufacturing, supplying, fixing precast RCC fouling marks as per Railway Specification with 1:2:4 nominal mix cement concrete and fixed at required location as as directed by Engineer-in-charge duly painted with all contractor's materials, labour, lead, lift etc. complete. The fouling mark shall be painted with the letter F/M engraved on both faces painted with black enamel paint.	Each	37	1,874.98	69,374.26



Signature

30		Manufacturing, fabricating and supplying retro-reflective sign boards, made of 2mm thick aluminium sheet or 3mm thick aluminium composite sheet, face to be fully covered with high intensity encapsulated type heat activated retro- reflective sheeting conforming to type-IV of ASTM-D4956-01 in yellow & black or other colour combination including subject matter, message, symbols, borders etc. as approved by Engineer In-charge or as per IRPWM guidelines, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class-2 of ASTM-D- 4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back-support frame of M.S. angle iron of size 25mm x 25mm x 3mm alongwith theft resistant measures, mounted and fixed with 2 nos. M.S. angles of size 35mm x 35mm x 5mm to a vertical post made up of M.S. Tee section ISMT 50mm x 50mm x 6mm, back side of board shall be with non- peelable weather-proof paint, consisting of one coat of zinc chromate primer and two coats of epoxy paint. Vertical post shall have black & white anti-corrosive paint or powder coating complete, as directed :				
(i)		Un-manned Level Crossing Danger Stop Board	Each	0	3,676.51	0.00
31		Manufacturing, supplying and fixing Curve Indicator / Point Indicator / SEJ Boards to be provided at various locations on formation, made out of MS sheet 2mm thick of size 450mm x 300mm duly fixed with MS frame of 25mm x 25mm x 3mm angle welded to 50mm x 50mm x 3mm MS angle, 1000mm long post split and bent 100mm at bottom end with all lead & lift as per specification and including painting of details with enamel paint, as directed by Engineer in-charge (Earthwork & concreting will be paid separately)	Each	75	882.48	66,186.00
32		Fixing MS Indicator Boards as per standard design including excavation, refilling, concreting in foundation and painting with enamel and luminous paints as directed by Engineer in-charge. Notes : (1)Supply of steel for posts & boards shall be paid separately;— (2)Excavation & concrete work will be paid separately} -				
(i)		Boards with single post	Each	20	271.24	5,424.80
(ii)		Boards with two posts	Each	55	287.96	15,837.80
33		Anti-corrosive painting of rail outside track on rail bottom, web, foot and fishing plane as per requirement with two coats of bituminous emulsion without mica (IP No.56192 and RDSO Specification No.IRS-P-30-1996) of reputed make including surface preparation, i.e cleaning with wire brush/sand paper as a complete job as per Para 250 of Indian Railways permanent Way Manual.	Track Matre	15500	93.75	14,53,125.00
34		Construction of buffer end as per CE's drawing No.23772 with IRCON/MCL rail of 90R/52/60 kg with 1:3:6 concrete, the rate includes cutting of rails of required length bending of rails as per the drawing, transportation of rails from IRCON/MCL store depot to site, fixing of PSC sleepers, fish plates nuts and bolts, white wash and painting of PSC sleeper excavation of foundation to the required depth etc (PSC sleeper will be supplied by IRCON/MCL) cement will be paid separately.	Each	7	61,123.39	4,27,863.73



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35	Fabricating & fixing a guard rail on bridge duly drilling / cleaning of holes, fixing to the sleepers and oil the threads of bolts & nuts and bending the guard rail ends as per relevant RDSO drg and fixing in position on the PSC sleeper in side of both running rails with required fittings (required fittings for fixing of guard will be arranged by contractor at his own cost) as per directions of enigneer at site, only 52/60 kg rail shall be issued free of cost by IRCON/MCL from the stack. The rate shall be inclusive of all lead, lift, transport of rail to work site, oiling, greasing, tools &tackles and labour etc(payment shall made on the basis of running track meter measured from end to end of guard rail along the center line of track on PSC sleeper).	Track Metre	200	1,387.48	2,77,496.00
36	Manufacturing fabricating and fixing of check rails on PSC sleeper at curved track with MCL's 52 kg/60 kg rails and P Way fitting including gas cutting one flange wherever required fixing of distant block with bolts and drilling of holes and flaring at ends as per approved drawing and specifications as directed by the engineer in charge. The rate shall be inclusive of all contractors labour, tools, plant and material required for fabricating etc.complete including transportation of check rails from nearest P Way depots to actual site of work with all loading, unloading, labour etc. required.	Running Metre	1500	515.62	7,73,430.00
37	Manufacturing and fixing in position cement concrete (1:2:4) curve pillar/kilometer post/gradient post as per Railway standard drawing with proper painting and lettering as per directive of EIC of the work. The rate is inclusive of all materials like cement, stone aggregate, sand and paints etc. earth work in exacavation and all incidental works required for fixing in position complete in all respect.	Each	80	1,964.67	1,57,173.60
Part 6-Welding Works & Ttransportation					
38	At Welding of rail joints 60 kg, single rail into 3 rail panel in situ/cess by SKV process with contractors welding portion approved by RDSO (to be supplied with authenticated certificate) dry moulds, consumbale etc including supplying skilled/artisan staff like RDSO certified welder, molder, chipper, cutter, aligner, stricker/hammer men and adequate Nos of semiskilled and unskilled Tabour etc and supplying petrol as required for facilitating welding work on track providing suitable gap by delinking of rails, pulling rails to create gap for welding, fixing the petrol tanks and fittings rails by approved contractor equipment and chipping the excess material if required, aligning, leveling etc.Shifting/readjusting the joint sleepers upto 30 cm on either side of joint complete including linking of rails, filling of ballast in all respects shall be carried as per Railway welding manual and as directed by the engineer-in-charge.	Each	1800	5,703.98	1,02,67,164.00
Part -7 Other Works & Dismantling of track					
	Dismantling of existing B.G track of 52kg/60kg/90R or any other section of rails with any type of sleepers with any density with any types of fittings and fastenings. The rate should be inclusive of cutting rails, fish plates, bolts & nuts including jamed etc including extracting if burried in earth/coal. Released materials should be segregated and are to be deposited to MCL/Railway's nominated place, including loading, transportation, unloading and stacking as directed by EIC..	Track Km	0.28	1,18,060.89	33,057.05



39		Carrying out USFD testing of Alumino Thermic (AT) welds on all types of rails, using 0° (2 MHz) double crystal; 70° (2 MHz) 20mm x 20mm single crystal probe for head & flange testing; 2 nos. 45° (2 MHz) single crystal with tandom rig for testing from rail top to bottom & for half moon testing and 70° (2 MHz) 20mm x 20mm side looking probe by NBC (Need Based Concept) method under traffic conditions as per provisions of IR's "Manual & Specifications for Ultrasonic Testing of Rails and Welds" & related instructions duly marking the defects, submission of daily reports and storing back-up data as specified & directed. The rates are inclusive of contractor's men, materials & machines complete unless otherwise specified and directed : With Contractor's USFD machine : Track having upto 3 rail panels.	Each	1800	210.44	3,78,792.00
40	012050	Providing of Blanketing over finished formation as per latest RDSO specifications and procedures by supplying materials of approved quality, spreading in layers not exceeding in 30cm in thickness in loose conditions and leveling by motor grader and compacting by vibro roller of required capacity upto desired degree of compaction, finishing to correct profile with all lead and lift, complete in all respect to the satisfaction of the Engineer-in- Charge. Rate includes all labour, material, tools, plants, machinery, testing equipment, testing charges, taxes, Royalties, Octroi etc. and all other incidental charges except for mechanical compaction which shall be paid extra under relevant item. Note: the material for blanket layer shall be well graded sandy gravel or crushed rock within the enveloping curves for upper blanket later as shown in sketch-B of RDSO document 'GE:G-1, July 2003.' (compaction shall be paid separately).	Cum	140000	562.53	7,87,54,200.00
Total						36,76,94,527.39
Total Cost of Schedule-J excluding GST						36,76,94,527.39

