



Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL)
Government of India, Ministry of Railways

Tender No. MGS/EN/RFO/SSM/295/2020

for

Name of Work: Construction of Rail Flyover and its approaches on Viaducts, Formation in Embankments/Cuttings including blanketing, Supply and Spreading of Ballast and related works for single track electrified railway line on Item-Rate Basis for Sasaram- Ara line of E.C. Railway connecting Sasaram Yard with Ara Line over IR and DFC tracks and related works in East Central Railway in the state of Bihar in India

E-TENDER DOCUMENT
FINANCIAL BID (PACKET-B)

May-20

Employer:
DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)
Under
MINISTRY OF RAILWAYS

CGM OFFICE
General Manager/Coordination, DDU
DFCCIL
Manas Nagar Railway Colony,
Pt Deen Dayal Upadhyay Nagar (Mughalsarai)
Chandauli -232101, Uttar Pradesh, India

CORPORATE OFFICE
DFCCIL, 5TH Floor, Supreme Court Metro Station Building,
New Delhi-110001

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GENERAL INFORMATION / DATA SHEET

TENDER NOTICE No.	MGS/EN/RFO/SSM/295/2020 Date 01.05.2020
Name of the work	Construction of Rail Flyover and its approaches on Viaducts, Formation in Embankments/Cuttings including blanketing, Supply and Spreading of Ballast and related works for single track electrified railway line on Item-Rate Basis for Sasaram- Ara line of E.C. Railway connecting Sasaram Yard with Ara Line over IR and DFC tracks and related works in East Central Railway in the state of Bihar in India
(a) Tender Value (in Rs.)	₹ 3,02,46,33,369
(b) Completion Period	24 months
(c) Earnest Money	₹ 3,02,50,000
(d) Date and Time of Issue of Tender	From 11.00 Hrs of 04.05.2020
(e) Last date and Time of submission of Tender	05.06.2020 upto 15:00 hrs
(f) Date and Time of Opening of Tender (Technical bids -Packet A)	On 05.06.2020 at 15:30 hrs Opening date of Financial Bid will be Notified later
(g) Validity of offer	120 days from the date of opening of Technical Bid
(h) Retention Money / Security Deposit	5 % of Contract Value
(i) Performance Bank Guarantee	Performance Guarantee (PG) have to be submitted within 30(thirty) days from the date of issue of Letter Of Acceptance (LOA), amounting to 5% of the contract value in the form as given in clause 16.4 of GCC

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Summary of Prices

Name of Work: Construction of Rail Flyover and its approaches on Viaducts, Formation in Embankments/Cuttings including blanketing, Supply and Spreading of Ballast and related works for single track electrified railway line on Item-Rate Basis for Sasaram- Ara line of E.C. Railway connecting Sasaram Yard with Ara Line over IR and DFC tracks and related works in East Central Railway in the state of Bihar in India

S. No.	Description of works	DFCCIL Estimate Cost	% Rate Quoted by Tenderer	Amount
1	2	3	4	5
1	Execution of all works as per Schedule "A - I" (NS Item)	1,33,44,46,965.78		
2	Execution of all works as per Schedule "A - II" (NS Item)	4,86,08,956.80		
3	Execution of all works as per Schedule "A - III" (NS Item)	3,13,75,181.29		
4	Execution of all works as per Schedule "B - I" (Item as per IR USSOR 2019)	4,89,95,986.24		
5	Execution of all works as per Schedule "B - II" (Item as per IR USSOR 2019)	50,39,47,536.97		
6	Execution of all works as per Schedule "B - III" (Item as per IR USSOR 2019)	7,46,59,733.00		
7	Execution of all works as per Schedule "B - IV" (Item as per IR US SOR 2019)	50,00,000.00		
8	Execution of all works as per Schedule "C - I" (NS Item)	25,67,22,934.04		
9	Execution of all works as per Schedule "C - II" (NS Item for Reinforcement Steel FE500D only)	72,08,76,075.00		
	Total	3,02,46,33,369.11		

NOTES:

- (i) The Tenderer shall quote single percentage above/bellow/at par for each Schedule. If the tenderer quotes different percentage (%) above / below againts each items of any schedule (i.e. A-I, A-II, A-III, B-I, B-II, B-III, B-IV, C-I & C-II), his offer will be summarily rejected.
- (ii) The above prices are inclusive of all taxes (GST, Works Contract Tax etc.), Octroi or Local levies etc
- (iii) If the uniform percentage quoted by the Tenderer does not clearly indicate whether the rates are above/at par/below the estimated rates then through sign convention it will be considered to be on plus side and evaluated accordingly.
- (iv) Rate of item payable to Contractor shall be as per following example:-
If the rate of any item of in Schedule is "X" and
 - a) If percentage quoted by the contractor is 5% above (+5%). Rate payable to contractor = (X)x 1.05
 - b) If percentage quoted by the contractor is 5% below (-5%). Rate payable to contractor = (X)x 0.95
 - c) If percentage quoted by the contractor is at par, Rate payable to contractor = (X) x 1

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Schedule of Prices

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Name of Work: Construction of Rail Flyover and its approaches on Viaducts, Formation in Embankments/Cuttings including blanketing, Supply and Spreading of Ballast and related works for single track electrified railway line on Item-Rate Basis for Sasaram- Ara line of E.C. Railway connecting Sasaram Yard with Ara Line over IR and DFC tracks and related works in East Central Railway in the state of Bihar in India

Sch - A-I Non-Schedule Item

SN	Ref. Item no.	Description	Unit	Qty	Rate	Amount	
1	NS - 1	<p>Supply, fabrication, erection and launching (within traffic block hours over IR portion) of welded type Open Web Girder of span 76.2 m or as per design as per RDSO standard drg / approved drawing and as per Indian Railway Standard Specification for Fabrication and Erection of Steel Girder Bridges and Locomotive Turnable (Fabrication Specification) Serial No B1 - 2001 (amended up to date) including all incidental works etc, Supplying and fixing in position of shop welding/shop bolting with nuts and washers, field bolts, required for complete fabrication of the girders and transportation of the fabricated material at site and erection of the same at place as directed by engineer including metalizing with sprayed aluminium painting as per Clause No. 39.2.1 of B1- 2001 and launching with all contractor's labour, fuel, consumables, machinery, loading, unloading, tools and plants, material, lead and lift complete job as per specifications and as directed by Engineer.</p> <p>Notes</p> <p>(i) Steel (Plates and Rolled section) shall conform to IS: 2062 - 2011. It shall have Sub quality 'B0' & Grade E250 (Fe 410).</p> <p>(ii) The steel Shall be procured only from those firms, which are Established, Reliable, Indigenous & Primary Producers of Steel, having Integrated Steel Plants (ISP), using iron ore as the basis raw material and having in house iron rolling facilities, followed by production of liquid steel and crude Steel.</p> <p>(iii) 40% of rate payment shall be made after Steel material required for fabrication (as per drawing) is received at site</p> <p>(iv) 15% of rate payment shall be made on acceptance of fabricated components at site</p> <p>(v) 20% of rate payment shall be made after erection & launching</p> <p>(vi) (a) 10% of rate payment shall be made after metalizing / Painting (b) 15% of rate payment shall be made after final approval of DFCCIL and successful completion of all works included in this item including metalizing and finishing complete.</p> <p>(vii) The 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 and approved method of launching complete.</p> <p>(viii) The rate also includes making necessary arrangements for inspection, testing, making temporary erection, dismantling, modification etc to facilitate inspection and approval of Inspecting Agency nominated by DFCCIL.</p>	1	MT	500	1,39,972.80	6,99,86,401.28

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		(ix) The contractor shall submit the detailed erection drawing and Launching Scheme along with necessary design calculation for approval to DFCCIL /Railway/ CRS before erection and launching of Girder.					
		(x) Cost of temporary supports/arrangement required for the erection / launching as per Launching Scheme approved by IR/CRS is included in above rates. Nothing extra shall be payable on this account					
		(xi) The contractor shall take all safety precautions during execution as per extant rules/ guidelines nothing extra shall be payable on this account					
		(xii) Notwithstanding above, the contractor shall be fully responsible for any mishap that make occur as a result of negligent working. Contractor has to take every precautionary measure for safety of running train during and after launching of Girder.					
		(xiii) The rate includes launching under traffic blocks wherever required. However, the rate does not include the cost of possession of traffic / OHE block.					
		(xiv) The block required shall be arranged by DFCCIL at the request of contractor. The duration of the blocks and speed restriction shall be as approved by Engineer. if the block granted is not made available due to unavoidable reason, nothing extra/ no compensation shall be paid.					
		(xv)However penalties, if any, levied by Indian Railway caused due to any careless working or otherwise of violation of the Terms and condition of the track/ OHE block, shall be payable by the contractor					
		(xvi) The Cost of all inspections and tests as per prevailing code for acceptance during fabrication/erection/launching shall be borne by Contractor.					
		(xvii) For final payment, the weight of span as given in standard RDSO drawing including weight of rivet heads/welds /bolts shall be considered irrespective of interim stage payment.					
2	NS - 2	Supply, fabrication, erection and launching of all types of steel Composite Girders of specified span up to 36m with structural steel conforming to Quality 'B0' Grade Designation E250 conforming to IB:2062 as per RDSO standard drawing / approved drawing and as per Indian Railway Standard Specification for Fabrication and Erection of Steel Girder Bridges and Locomotive Turnable (Fabrication Specification) Serial No B1 - 2001 (amended up to date) including all incidental works etc, Supplying and fixing in position of shop welding/shop bolting with nuts and washers, field bolts, required for complete fabrication of the girders and transportation of the fabricated material at site and erection of the same at place as directed by engineer including metalizing with sprayed aluminium painting as per Clause No. 39.2.1 of B1- 2001 and launching with all contractor's labour, fuel, consumables, machinery, loading, unloading, tools and plants, material, lead and lift complete job as per specifications and as directed by Engineer.	1	MT	11200	1,12,898.26	1,26,44,60,564.50
		Notes					
		(i) Steel (Plates and Rolled section) shall conform to IS: 2062 - 2011. It shall have Sub quality 'B0' & Grade as per standard RDSO drawing and rate shall be inclusive of relevant grade of steel as per Drawing.					

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(ii) The steel Shall be procured only from those firms, which are Established, Reliable, Indigenous & Primary Producers of Steel, having Integrated Steel Plants (ISP), using iron ore as the basis raw material and having in house iron rolling facilities, followed by production of liquid steel and crude Steel.			
(iii) 40% of rate payment shall be made after Steel material required for fabrication (as per drawing) is received at site			
(iv) 15% of rate payment shall be made on acceptance of fabricated components at site			
(v) 20% of rate payment shall be made after erection & launching			
(vi) (a) 10% of rate payment shall be made after metalizing / Painting			
(b) 15% of rate payment shall be made after final approval of DFCCIL and successful completion of all works included in this item including metalizing and finishing complete.			
(vii) The 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 and approved method of launching complete.			
(viii) The rate also includes making necessary arrangements for inspection, testing, making temporary erection, dismantling, modification etc to facilitate inspection and approval of Inspecting Agency nominated by DFCCIL.			
(ix) The contractor shall submit the detailed erection drawing and Launching Scheme along with necessary design calculation for approval to DFCCIL /Railway/ CRS before erection and launching of Girder. The Launching Scheme shall be such that it requires minimum duration of Speed Restriction and Traffic Block.			
(x) Cost of temporary supports/arrangement required for the erection / launching as per Launching Scheme approved by IR/CRS is included in above rates. Nothing extra shall be payable on this account			
(xi) The contractor shall take all safety precautions during execution as per extant rules/ guidelines nothing extra shall be payable on this account			
(xii) Notwithstanding above, the contractor shall be fully responsible for any mishap that make occur as a result of negligent working. Contractor has to take every precautionary measure for safety of running train during and after launching of Girder.			
(xiii) The Cost of all inspections and tests as per prevailing code for acceptance during fabrication/erection/launching shall be borne by Contractor.			
(xiv) For final payment, <u>the weight of span as given in standard RDSO drawing</u> including weight of rivets heads/welds bolts shall be considered irrespective of interim stage payment.			
	Total Amount		1,33,44,46,965.78

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Sch - A-II Non-Schedule Item

SN	Ref. Item no.	Description	Unit	Qty	Rate	Amount	
1	NS - 1	<p>Supplying, stacking, spreading in 200 mm (compacted thickness) and compacting with about 04 passes of 10-12 ton capacity roller, machine crushed track Ballast as per specifications in RDSO IRS-GE-1, June' 2004 with up to date correction slips, if any, and from approved quarry/source, Stacking in trapezoidal shape as per standard profile- complete in all respect. The rate includes levelling/surface preparation of track-bed /stacking-ground, transportation, taxes, royalties etc. with all contractor's labour, fuel, consumables, materials, lead and lift, loading, unloading, tools & plants as a complete job as per specification and as per direction of Engineer.</p> <p>Notes-1: (a) 70% of the quoted rate will be paid after supplying and stacking of ballast at the location approved by Engineer based on the quantity measured in stack.</p> <p>(b) The balance 30% of the payment will be paid after spreading, compacting of ballast over formation including all lead, lift, rehandling complete in all respect.</p> <p>Note-2: Quantity of 200 mm thick (Difference of Initial level and final level) compacted ballast will be calculated by multiplying with length and width of spreaded and compacted ballast and if there is difference noticed in quantity supplied in stack and quantity calculated after spreading and compaction, payment will be made for minimum of the two measurements.</p> <p>Note-3: The final payment against this item properly completed as per description shall be limited to the compacted quantity over the formation, irrespective of any stage payment released as per Note-1 above.</p>	1	cum	7776	3,400.00	2,64,38,400.00
2	NS-2	Supplying and stacking, machine crushed track Ballast as per specifications in RDSO IRS-GE-1, June' 2004 with up to date correction slips, if any, and from approved quarry/source, Stacking in trapezoidal shape as per standard profile- complete in all respect. The rate includes levelling/surface preparation of stacking-ground, transportation taxes, royalties etc. with all contractor's labour, fuel, consumables, materials, lead and lift, loading, unloading, tools & plants as a complete job as per specification and as per direction of Engineer.	1	cum	9315.36	2,380.00	2,21,70,556.80
Total Amount						4,86,08,956.80	

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Sch - A-III Non-Schedule Item

SN	Ref. Item no.	Description	Unit	Qty	Rate	Amount
1	NS - 1	Reinforced Cement Concrete M-30 / M-35 / M-40 grade for cast in-situ RCC deck slab on Steel 'I' girder , using controlled concrete by weigh batching / using RMC at any height above ground level as per design with contractor's materials, admixture, providing and removing steel shuttering, centring, staging, scaffolding, supports, all labour, tools, plant & machinery, curing, transportation and handling of all lead and lift, taxes, royalties etc complete in all respect and as per direction of Engineer including leaving necessary reinforcement rods for providing parapet, cable duct as per approved drawings and RDSO standard drawings & specifications, as directed by Engineer in-charge but excluding cost of cement & reinforcement steel {cost of cement & steel will be paid as per items under respective schedule items}	1 cum	7809.22	4,017.71	3,13,75,181.29
		Notes: 1. The rate is inclusive of Centring and shuttering including strutting, propping etc. and removal of form for shuttering and formwork as required for bridge deck-slab. 2. The quantity of cement and reinforcement steel shall be calculated based on approved Design Mix and Structural Drawings which shall be paid separately under respective Schedule items. 3. The quality of concrete shall conform to relevant IS and IR Codes.				
Total Amount						3,13,75,181.29

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Annexure of Sch B-I							
SN	Ref. Item no. of US SOR 2019	Description	Unit	Qty	Rate	Amount	
1	011010	<p>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.</p> <p>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.</p> <p>{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.}</p>					
(a)	011011	In all conditions and classifications of soil except rock	1	Cum.	12630.00	137.57	1737509.1
2	012020	<p>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 SQ2, 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.</p> <p>Note: Payment under this item shall be made only upto the thickness as approved by Engineer-in-Charge. Any additional thickness executed shall be paid under the item of Earthwork in filling in embankment for Soil Quality Class SQ1.</p>	1	Cum.	106000.00	296.55	3,14,34,300.00

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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.	1	Cum.	106000.00	18.12	1920720
4	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 including compaction. Note:(i) The work shall be carried out as per RDSO Guidelines and specifications for Design of Formation for Heavy Axle Load (Report No. RDSO/ 2007/GE: 0014 of November, 2009) for mechanically produced blanketing material for Railway Formation. (ii) The Quality Control tests as prescribed vide RDSO/2007/ GE:0014 with up to date ammendment shall be arranged at site by the Contractor, for which no separate payment will be made. (iii) The tenderer is requested to go through specifications of blanketing material as per GE-0014 RDSO specifications. The blanketing material is expected to be manufactured in quarry/ site with pug mill type blender from stone crushed material of required quality as per specification with the grading falling in the enveloping curve. The rate includes the CBR tests, Los Angels Abrasion test, Impact tests, Atterberg limits, Grain size analysis, MDD and all quality tests as per specifications to be carried as per the laid down frequency on blanketing material/ compacted finished blanket surface. (iv) Measurement will be made on finished profile after compaction.	1	Cum.	6843.00	1730.93	11844753.99
5	013050	Turfing / planting, including all lead & lift and watering as required until properly rooted with. 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.					
(a)	013051	Turfing with sods, 10cm thick and 20cm square closely laid	100	Sqm	8820.00	5872.21	517928.922

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6	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 tructures in connection with Gauge Conversion, Doubling, New lines					
(a)	022011	All kinds of soils	1	Cum	5392.91	174.58	9,41,494.23
7	121070	Provision of barricading with contractor's bamboos / balli vertical post of 75 to 100mm dia. planted at every 2m interval, projecting at least 1.5m above ground level and driven firmly (minimum 0.5m) inside ground and including painting verticals & horizontals with red luminous paints /strips at alternative bay on barricade. Barricades shall be completely removed when no longer required by engineer in-charge. (60% payment shall be made on provision of barricading at work-site)					
(a)	121071	With 3 horizontal bamboo / balli members of minimum 50mm dia. spaced equally	1	RMtr	4000	149.82	599280.00
					Total		4,89,95,986.24

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Annexure of Sch B-II

SN	Ref. Item no. of US SOR 2019	Description	Unit	Qty	Rate	Amount	
1	022060	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, vibrating, pumping and bailing out water where ever required with all materials and labour complete but excluding the cost of cement and shuttering as per drawings and technical specifications as directed by Engineer	1	Cum	2412.657	2455.77	59,24,930.68
2	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.	1	Cum	12936.18	2472.32	3,19,82,376.54
3	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	1	Cum	48984	2719.55	13,32,14,437.20
(b)	022053	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	1	Cum	12901.9	2843.17	3,66,82,295.02

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4	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	1	M	25152	9002.76	22,64,37,419.52
5	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.	1	Each	1602	3037.12	48,65,466.24
6	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)	022032	1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)	1	Cum	1387.525	2448.55	33,97,424.34
7	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)	031101	For 40 MM expansion	1	M	2188.9	6144.97	1,34,50,724.83
8	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 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.					
(a)	031111	For Span design load upto 100 MT	1	Each	5	76146.71	3,80,733.55
(b)	031112	Extra for every increase of 1 MT or part thereof in the span load capacity upto 800 MT	1	MT	18200	750.93	1,36,66,926.00

Amix

9	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)	1	Cum	631.775	2114.26	13,35,736.61
10	051080	Providing and laying Filter Material as per RDSO Specifications underneath pitching in slopes complete as per drawing and Technical Specification	1	Cum	301.2	2769.26	8,34,101.11
11	052020	Providing and laying 300mm thick (average) Dry Stone flooring with boulders of not less than 35kg each in weight, hand packed with surface levelled off to the correct section with hammer dressing as necessary on the ground including filling the gaps with quarry spalls and ordinary sand complete including cost of supply of all materials, labour, lead, lift, tools, plants, crossing of tracks and the like as per drawing and technical specification as directed by Engineer in charge	1	Cum	23.11	1860.51	42,996.39
12	052150	Providing weep holes by making suitable opening or drilling in existing Brick Masonry / Plain / Reinforced Concrete abutment, wing wall/return wall with 110 mm dia UPVC pipe (working pressure 4kg/sqcm) extending through the full width of the structure complete and repairing the same with cement mortar 1:2 (1 cement : 2 coarse sand). Rate is excluding the cost of cement which shall be paid extra	1	M	8897.75	505.21	44,95,232.28
13	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	1	Cum	8015.99	454.35	36,42,065.06
14	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	1	sqm	37820	602.78	2,27,97,139.60
(b)	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	sqm	8200	97.26	7,97,532.00
Total Amount							50,39,47,536.97

Amit

Name of Work: Construction of Rail Flyover and its approaches on Viaducts, Formation in Embankments/Cuttings including blanketing, Supply and Spreading of Ballast and related works for single track electrified railway line on Item-Rate Basis for Sasaram- Ara line of E.C. Railway connecting Sasaram Yard with Ara Line over IR and DFC tracks and related works in East Central Railway in the state of Bihar in India

Annexure of Sch B-III

SN	Ref. Item no. of US SOR 2019	Description	Unit	Qty	Rate	Amount
1	041100	Supplying, fitting and fixing in position true to line and level cast steel rocker bearing of different load bearing capacity conforming to IS :7666, IS:9565, IS:1030, IS:919, IS:3073 and IRS Bridge Code including all accessories as per drawing and Technical Specifications with all material, labour, T&P as a complete job. The payment shall be made for the load bearing capacity in Metric Tonne as per approved drawing.	1 MT	1200	633.23	7,59,876.00
2	041101	Extra over item 041100 for working under traffic/ traffic block <u>(10%)</u>	1 MT	1200	63.323	75,987.60
3	041110	Supplying, fitting and fixing in position true to line and level forged steel roller bearing of different load bearing capacity conforming to IS :7666, IS:9565, IS:1030, IS:919, IS:3073 and IRS Bridge Code including all accessories as per drawing and Technical Specifications with all material, labour, T&P as a complete job. The payment shall be made for the load bearing capacity in Metric Tonne as per approved drawing.	1 MT	1200	689.3	8,27,160.00
4	041111	Extra over item 041100 for working under traffic/ traffic block <u>(10%)</u>	1 MT	1200	68.93	82,716.00
5	041140	Design, supply, fitting and fixing in position true to line and level POT-PTFE bearing of 250 MT Capacity, consisting of a metal piston supported by a disc or un reinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel / fabricated structural steel, metal and elastomer elements complete as per IS:2062, IS:1030, AISI:304, AISI:316, IS:6911, BS:3784, IS:3400, IS:226, BS 5400, Bridge Code and as per approved drawing and Technical Specifications. The design of the bearings shall be submitted by the manufacturers / contractor and got approved from Railway before fixing. Test report after inspection of the bearings shall be submitted and got approved before the materials are lifted from the manufacturer premises.				
(a)	041141	POT-cum -PTFE Bearing (Free end)	1 Each	190	71585.46	1,36,01,237.40
(b)	041142	POT Bearing-Fixed Type	1 Each	190	91997.03	1,74,79,435.70

Amix

(c)	041143	POT-cum -PTFE Guided (L)Bearing	1	Each	190	113355.07	2,15,37,463.30
(d)	041144	POT-cum -PTFE Guided (T)Bearing	1	Each	190	106820.3	2,02,95,857.00
			Total Amount				7,46,59,733.00

Amit

Name of Work: Construction of Rail Flyover and its approaches on Viaducts, Formation in Embankments/Cuttings including blanketing, Supply and Spreading of Ballast and related works for single track electrified railway line on Item-Rate Basis for Sasaram- Ara line of E.C. Railway connecting Sasaram Yard with Ara Line over IR and DFC tracks and related works in East Central Railway in the state of Bihar in India

Annexure of Sch B-IV

SN	Ref. Item no. of US SOR 2019	Description	Unit	Basic cost	Rate	Amount
1		Any other items not cover in items in schedule of B-I, II and III of IR USSOR 2019	LS	5000000		50,00,000.00
				Total Amount		50,00,000.00

Amit

Name of Work: Construction of Rail Flyover and its approaches on Viaducts, Formation in Embankments/Cuttings including blanketing, Supply and Spreading of Ballast and related works for single track electrified railway line on Item-Rate Basis for Sasaram- Ara line of E.C. Railway connecting Sasaram Yard with Ara Line over IR and DFC tracks and related works in East Central Railway in the state of Bihar in India

Annexure of Sch C-I

SN	Item No.	Description	Unit	Qty	Rate	Amount
1	1	Supply of 43 grade cement OPC conforming to IS: 8112 : 1989 / IS:269: 2015 with latest amendments and using the same in the work as per approved mix design as per prescribed rates of consumption including all material, lead and lift, labour, loading unloading, ascent, descent, crossing of Railway lines(s), royalty, taxes, transport (contractor's own), tools and plant complete job as per specification and as per direction of Engineer.	1 MT	35166.1282	7300.29	25,67,22,934.04
Total Amount						25,67,22,934.04

Note: Cement has to be supplied as per requirement of the work in terms of standard specifications. Payment against supply will be made only after consumption of cement in the relevant items of work.

Amit

Name of Work: Construction of Rail Flyover and its approaches on Viaducts, Formation in Embankments/Cuttings including blanketing, Supply and Spreading of Ballast and related works for single track electrified railway line on Item-Rate Basis for Sasaram- Ara line of E.C. Railway connecting Sasaram Yard with Ara Line over IR and DFC tracks and related works in East Central Railway in the state of Bihar in India

Annexure of Sch C-II							
SN	Item no.	Description	Unit		Qty	Rate	Amount
1	1	Supplying reinforcement steel conforming to IS:1786-2008 including decoiling, straightening, cutting, bending, placing in position, binding with 1MM dia GI binding wire including all material, lead and lift, labour, loading unloading, ascent, descent, crossing of Railway lines(s), royalty, taxes, transport (contractor's own), tools and plant complete job as per specification and as per direction of Engineer.					
		Thermo-Mechanically Treated bars Grade 500D	1	Kg	96,11,681	75	72,08,76,075.00
					Total Amount		72,08,76,075.00

Note: 1. Reinforcement, shall be measured in length for different diameters used in the works and then paid as per relevant specification. Wastages, overlaps, coupling, welded joints, space bars, chairs and binding wire shall not be measured and cost of these items shall be deemed to be included in the above Schedule.

Note for Stage Payment:

- i) The material shall be delivered at site and properly stored under covered sheds in measurable stacks.
- ii) The quantities of materials shall be brought to the site only in such installments that would facilitate smooth progress of work and consumed in reasonable time.
- iii) Proper accountal in the material register to be maintained in the prescribed format at the site for the receipt and use of the material.
- iv) Ownership of such material shall be deemed to vest with the DFCCIL for which the contractor should submit an indemnity bond in prescribed format.
- v) Before releasing the stage payment, the contractor shall insure the material at his own cost in favour of DFCCIL against theft, damages, fire etc.
- vi) Stage payment in all such cases not be more than 75% of the rate of steel awarded in the contract. The balance payment shall be released only after the material is actually consumed in the work.
- vii) The price variation claim for steel would continue to be governed as per extant PV clause and with reference to delivery at site.

Amit