



Tender No.MGS/03/2017-2018/4-ROB/Bihar/205

for

Name of work:-Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROB (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandia-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway

**FINANCIAL BID
(PACKET-B)**

**TENDER DOCUMENT
September , 2017**

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

GENERAL INFORMATION / DATA SHEET

TENDER NOTICE NO	MGS/03/2017-2018/4-ROB/Bihar/205
Name of the work	Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandia-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway
(a) Tender Value (in Rs.)	₹ 484,671,233.41
(b) Completion Period	18 months
(c) Earnest Money	Rs. 50,00,000.00
(d) Date and Time of Issue of Tender	20.09.2017 and 11.00 hrs
(e) Last date and Time of submission of Tender	23.10.2017 upto 15:00 hrs
(f) Date and Time of Opening of Tender (Technical bids -Packet A)	On 23.10.2017 at 15:30 hrs
(g) Validity of offer	120 days
(h) Retention Money / Security Deposit	5 % of Contract Value
(i) Performance Bank Guarantee	Performance Guarantee (PG) have to submit 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 give in clause 16.4 of GCC



SUMMARY OF PRICES					
Name of work:- Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandi-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumbhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway					
S. No.	Description of works	Cost as per USSOR 2012 of EC Rly / Basic Cost	DFCCIL updated %	DFCCIL updated cost in Rs	Rates to be quoted as Percentage above / below / at par on updated DFCCIL Rate / cost given in Column-5)
1	2	3	4	5	6
1	Execution of all works as per Schedule "A" (NS Item)	173,705,425.55	0	173,705,425.55	For each Schedule, Rates to be quoted in the Excel Sheet provided in the Financial Bid clearly mentioning Percentage above / below / at par on updated DFCCIL Rate / cost given in Column-5. The submission shall be online on the tenderwizad site. No physical submission of Financial Offer is required.
2	Execution of all works as per Schedule "B-I" (Items as per SOR 2012 of EC Rly Chapter -1 only)	411,120.00	17.64	483,641.57	
3	Execution of all works as per Schedule "B-II" (Items as per SOR 2012 of EC Rly Chapters - 3,4,9,11 & 18 only)	868,536.40	14.48	994,300.47	
4	Execution of all works as per Schedule "B-VI" (Items as per SOR 2012 of EC Rly Chapters - 19,20 & 22 only)	79,042,348.41	18.33	93,530,810.88	
5	Execution of all works as per Schedule "B-VII" (Items as per SOR 2012 of EC Rly Chapters - 21 only)	45,361,161.70	35.03	61,251,176.65	
6	Execution of all works as per Schedule "B-VIII" (Items as per SOR 2012 of EC Rly Chapters - 23 & 24 only)	5,611,524.57	19.00	6,677,714.24	
7	Execution of all works as per Schedule "B-XII" (Items as per SOR 2012 of EC Rly not covered by the items of Schedule -A ,Schedule-B-I,B- II,B-VI , B-VII ,B-VIII , C-I & C-II only)	250,000.00	14.48	286,200.00	
8	Execution of all works as per Schedule "C-I" (Cement- OPC 43 Grade)	33,886,249.60	10.12	37,315,538.06	
9	Execution of all works as per Schedule "C-II" (Reinforcement Steel FE 500D)	95,400,800.00	15.75	110,426,426.00	
Grand Total				484,671,233.41	

NOTES:

- (i) The Tenderer shall quote single percentage for each Schedule. If the tenderer quotes different percentage (%) above / below againsts each items of any schedule (i.e. A, B-I, B-II, B-VI, B-VII, B-VIII, B-XII, C-I & C-II), else his offer will be summarily rejected.
- (ii) The above prices are inclusive of all taxes (GST, Works Contract Tax etc.), Octroi or Local levies. GST will be deducted from each bill and will be reimbursed on production of proof of deposition of GST.
- (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) This Tender Schedule does not contain Schedules B-III, B-IV, B-V, B-VI, B-X and B-XI because of these Schedules are not present.

(v) **Rate of item payable to Contractor shall be as per following example:-**

1) For Schedule B-I (Updation factor is 1.1764, since 17.64% above is the rate of DFCCIL over USSOR 2012 of EC Railway). If the rate of any item of USSOR – 2012 of EC Railway/Schedule B-I is "X" and

a) If percentage quoted by the contractor is 5% above (+5%). Rate payable to contractor = $(X) \times 1.1764 \times 1.05$

b) If percentage quoted by the contractor is 5% below (-5%). Rate payable to contractor = $(X) \times 1.1764 \times 0.95$

c) If percentage quoted by the contractor is at par, Rate payable to contractor = $(X) \times 1.1764$

2) Similarly updation factor for Schedule B-II, B-VI, B-VII, B-VIII, B-XII, C-I and C-II is 1.1448, 1.1833, 1.3503, 1.1900, 1.1448, 1.1012 and 1.1575 respectively.

3) In case of NS items i.e. Schedule A, Updation factor shall be 1.



Name of work:-Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandi-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway

Sch-A Non Schedule Item							
SN	NS Item	Description	unit	Qty	Rate	Amount	
1	NS-1	<p>Providing and laying in position machine batched, machine mixed and machine vibrated design Mix Cement concrete M-40 grade (cast in situ) Using 20 mm graded Crushed stone aggregate and coarse sand of approved quality in RCC deck slab laid to required camber including end cantilever, RCC crash barrier, RCC railing etc. including pumping of concrete to site of laying, finishing, using admixtures in recommended proportions (as per IS: 9103), if approved in mix design to accelerate or retard setting of concrete, improve Workability without impairing strength and durability with all contractor's labor, tools & plants material (excluding cost of cement reinforcement and suturing) Fuel consumables machinery, loading unloading, lead and lift complete in all respect as a complete jobs per speculations & as directed by engineer.</p> <p>Notes-</p> <p>(i) Payment for cement, reinforcement and shuttering shell be paid extra as per relevant USSOR item included in the relevant schedule.</p> <p>(ii) The concrete is to be poured at the approved safe height and distance from live OHE wires carrying 25KV AC traction (on IR Track) to cast monolithically to the required level as per approved drawing over already launched main steel girder with proper joining arrangement through shear connector.</p> <p>(iii) The necessary shuttering arrangement has to be planned. Using already launched main steel girder. No support from ground will be allowed for this purpose .The rates includes for working under running traffic condition, all leads, lifts, ascents, descents, all other obstructions etc</p> <p>(iv) The contractor shall make adequate arrangement below the girder to avoid falling of anything over the track during concreting of the slab. The rate includes design and provision of all temporary works and to ensure safety of running traffic at all times.</p>	1	CUM	1,175	8,332.19	9,790,323.25
2	NS-2	<p>Providing and laying in position machine batched. Machine mixed and machine vibrated Design mix cement concrete M-40 grade (Cast in situ) using 20 mm crushed stone aggregate and coarse and coarse sand of approved quality in wearing coat of lying. Finished using admixtures in recommended proportions (as per IS: 9103), if approved in mix design to accelerate or retard salting of concrete. Improve workability without impairing strength and durability with all contractors' labour, tools &plants, material (excluding cost of cement, reinforcement and shuttering) fuel ,consumables, machinery, loading, unloading, lead and lift complete in all respect as a complete job as per specification and as directed by engineer.</p> <p>Note-</p> <p>(i) Payment for cement, reinforcement and shuttering shall be paid extra as per relevant USSOR item included in the relevant schedule.</p>	1	CUM	190	4,489.13	852,934.70

SN	NS Item	Description	unit		Qty	Rate	Amount
3	NS-3	Supply, fabrication and erection of Welded type BOW STRING girders of required span BOW STRING girder of span more than 45.7 m as per RDSO standard drg / approved drawings, East Central Railway Unified Standard Specifications - 2012(amended up to date) and Indian Railways Standard specification for fabrication and erection of steel girder bridges and locomotive turntables (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, STUD SHEAR CONNECTOR etc. required for complete fabrication of the girders and transportation of the fabricated materials at site and stacking of the same at places as directed by Engineer including metalizing as per clause No 39.2.1 of B1- 2001 over the structural members with all contractor's labour, fuel, consumables, machinery, loading, unloading, tools & plants, material, lead and lift complete job as per specifications and as directed by Engineer.	1	MT	1,320	123,247.63	162,686,871.60
		Notes					
		(i) Steel (Plates and Rolled section) should conform to IS: 2062-2011. It shall have Sub quality 'BO' & Grade E250 (Fe 410) for rolled sections and E350 (Fe 490) for plates shall be fully killed and fully controlled cooled.					
		(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 basic raw material and having in house iron rolling facilities, followed by production of liquid steel & 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) 25% of rate payment shall be made after final approval of DFCCIL and successful completion of all works (ROB wise) included in this item including metalizing and finishing complete.					
		(vii) No deduction for holes and no addition for rivets /bolts/welds etc shall be made.					
		(viii) The contractor shall submit the detailed erection drawing and launching scheme along with necessary design calculation for approval to DFCCIL before erection and launching of girder.					
		(ix) Temporary supports if any required for the erection/ launching shall be erected after the approval of Engineer. Nothing extra shall be payable on this account.					
		(x) The contractor shall take all safety precautions with Engineer as per extant rules/ guidelines Nothing extra shall be payable on this account					
		(xi) Notwithstanding above, the contractor shall be fully responsible for any mishap that may 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.					
		(xii) The rate includes launching under traffic blocks wherever required. However, the rate does not include the cost of possession of traffic/ OHE block.					
		(xiii) The Block required shall be arranged by DFCCIL at the request of contractor. The duration of the block shall be as approved by Engineer. If the block granted is not made available due to unavoidable reasons, nothing extra/ no compensation shall be paid					

SN	NS Item	Description	unit		Qty	Rate	Amount
		(xiv) However penalties, if any, levied by Indian Railways caused due to any careless working or otherwise of violation of the Terms and conditions of the track/ OHE block, shall be payable by the contractor					
		(xv) The cost of all tests as per prevailing code for acceptance shall be borne by contractor					
		(xvi) The Rate also include fixing of 25 mm dia 200 long stud shear connectors as per Specification and drawing,					
4	NS-4	Supplying fabrication & fixing in position BRC protection screen with MS angle frame, expanded metal (XPM),GI sheet of 16 gauge, j Bolts etc of approved Railway design with two coats of aluminium paints of approved manufacturer as per drawing no. RDSO/ETI/C/0068 with all contractor's labour, tools & plants, material, fuel, consumables, machinery, loading, unloading, lead & lift complete in all respect as a complete job as per specification & as directed by Engineer.	1	Kg	3,200	117.28	375,296.00
		Sub-Total					173,705,425.55



Name of work:-Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandi-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway

Sch-B-I

SN	USSOR-2012 ECR	Description	unit		Qty	Rate	Amount
1	014110	Providing and removing barricading with the help of portable fencing along the running track where the work is to be done in close vicinity of the track. Fencing shall consist of self supporting steel angles of size 50 x50x6mm, 1.5m long provided with hooks etc. and embedded in CC 1:2:4 block of size 0.23x0.23x0.23m placed at c/c distance of 2m along the track. 12mm dia rods in three horizontal layers tack welded with the angle posts including providing retro-reflective tapes in Horizontal & vertical direction. Note : Released material will be the property of the contractor after the completion of work. Cost of cement to be paid separately.	1	Meter	1,600	256.95	411,120.00
		Sub-Total					411,120.00



Name of work:-Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandia-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway

Sch-B-II							
SN	USSOR-2012ECR	Description	unit	Qty	Rate	Amount	
SCH-B-II							
1	031020	Providing and laying cement concrete, up to plinth in retaining walls, walls (any thickness) including attached plasters, columns, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc, excluding the cost of cement and of shuttering, centering.					
(a)	031023	1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size)	1	cum	130	2,911.03	378,433.90
2	094040	Precast Chequered factory made terrazzo tiles 22mm thick with graded marble chips size upto 6mm in floors jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing of cement slurry complete on 20mm thick bed of cement mortar 1:4 (1 cement : 4 coarse sand)					
(a)	094042	With ordinary cement with pigment	1	Sqm	750	653.47	490,102.50
Sub-Total						868,536.40	



Name of work:-Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandia-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmadabad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmadabad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway

Schedule B-VI

SN	USSOR-2012ECR	Description	unit		Qty	Rate	Amount
1	192010	Earthwork in excavation 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					
(a)	192011	E/W in All kinds of soils	1	CUM	2,800	292.92	820,176.00
(b)	192020	Extra for the quantity of works, executed in or underwater and/or liquid mud including pumping out water as required	1	CUM	200	58.58	11,716.00
2	192040	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 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 recommended proportions (as per IS:9103), if approved in Mix design to accelerate or retard setting of concrete and/or improve workability 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	1,970	2,745.77	5,409,166.90
3	192060	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 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 10m from foundation top level, including finishing, using Admixtures in recommended proportions (as per IS:9103), if approved in Mix design to accelerate or retard setting of concrete and/or improve workability 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)	192061	Abutment & Pier	1	cum	1,220	2,883.06	3,517,333.20
(b)	192062	Wing wall and Return wall	1	cum	230	3,020.34	694,678.20
(c)	192063	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	1	cum	1,370	3,157.63	4,325,953.10

SN	USSOR-2012ECR	Description	unit		Qty	Rate	Amount
4	192070	Providing, driving and installing Bored cast in-situ Reinforced Cement Concrete piles of specified diameter and length below pile cap in M-35 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 casing pipe but including the cost of shoe and length of pile to be embedded in pile cap etc. complete, concreting by machine batching, machine mixing, scaffolding, using Admixture in recommended proportion (as per IS:9103), if approved in design Mix, 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, casing pipe & reinforcement shall be paid extra.					
(a)	192073	Pile 1000mm diameter	1	Meter	5,100	8,244.28	42,045,832.33
5	192080	Providing, fabricating and installing 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.	1	MT	40	66,812.05	2,672,482.00
6	192090	Extra for chieselling in addition to boring of piles, if chieselling is resorted to in hard rock or big stone boulders larger than 30cm depth by any means, i.e. by chiesel or manual chiesel and hammer method					
(a)	192092	1000mm diameter pile	1	Meter	140	1,216.55	170,317.00
7	192100	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)	192103	Initial load test up to 250 MT	1	Each	4	94,429.95	377,719.80
(b)	192104	Extra above 250 MT for each 50 MT	1	Each	4	12,282.86	49,131.44
(c)	192107	Rotine load test up to 250 MT	1	Each	4	76,386.05	305,544.20

SN	USSOR-2012ECR	Description	unit		Qty	Rate	Amount
8	192110	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)	192113	Piles with lateral load capacity of above 20 ton	1	Each	4	56,648.87	226,595.48
8	192120	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	203	41,814.00	8,488,242.00
9	195030	Centring and shuttering including strutting, propping etc. and removal of form for :					
(a)	195031	RCC Raft Foundation & Pile cap	1	Sqm	720	138.30	99,576.00
(b)	195032	Abutment, pier, wing walls and return walls	1	Sqm	2,200	227.40	500,280.00
(c)	195033	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	1	Sqm	5,400	230.28	1,243,512.00
10	201050	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)	201051	For 80mm expansion	1	Meter	180	28,789.51	5,182,111.80
11	201060	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 Kent ledges/loading material etc. The load shall be 1.25 times the stipulated design load, based on design load & not span					
(a)	201061	For Span design load upto 100 MT	1	Each	4	64,285.56	257,142.24
(b)	201062	Extra for every increase of 100 MT or part thereof in the span load capacity upto 800 MT	1	Each	4	63,125.55	252,502.20
12	222040	Supply and laying of coarse sand including consolidation, supply of all materials, labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer in charge in case loose slush is encountered at site of foundation before casting the foundation or before laying the filtering media	1	cum	1,100	1,386.33	1,524,963.00
13	222170	Providing and fixing of Drainage Spouts of 100mm UPVC complete as per drawing and Technical specification	1	Meter	144	359.48	51,765.12

SN	USSOR-2012ECR	Description	unit		Qty	Rate	Amount
14	222300	Dewatering of natural or accumulated water from any location. Payment to be done for Horse power of pump multiplied by pumping hours.	1	HP Hour	20	22.74	454.80
13	222360	Surface protection of Underside of Bridge Decks, Girders, Inside of Box Girders, Railings etc. of Bridges and Piers and Substructures which are not in River Bed by cleaning and drying the surface; repairing local defects, e.g. honeycombs with a paste of cement admixed with 5% by weight of cement of Polymer bonding agent, applying (@ 0.30 litre/sqm) a coat (DFT of 100-150 micron) of a translucent brown coloured modified phenolic resin based single component high performance polymeric waterproofing compound (sp. gr. 0.87, rosin content nil and a solid content of minimum 0.47%), applying (@ 0.25 litre/sqm) a top coat of a modified phenolic resin based single component waterproofing compound of grey or other shades (sp. gr. 0.85) before the base coat becomes tack-free; permitting the coatings to cure and dry naturally; the 2-coat system shall be impermeable under a water head of 20m, complete as per specification	1	Sqm	3,160	257.96	815,153.60
		Sub-Total					79,042,348.41



Name of work:-Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandia-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway

SCH-B-VII

SN	USSOR-2012ECR	Description	unit	Qty	Rate	Amount	
1	211010	Supplying of all types of structural steel conforming to Fe 410 B of IS:2062, fabrication, assembling, erection / slewing / end launching of steel girders (not requiring traffic block) upto 45.7m span on sub-structure including provision of trolley refuges, if required complete as per approved drawing including one coat of Zinc chrome primer to IS:104 & one coat of Zinc Chrome Red Oxide to IS:2074 and painting as per IRS-B-1 on all members (detailed fabrication and erection drawings & launching methodology will be prepared and got approved by the contractor from Railway). Rate includes fabrication of all the types of battens, bracings, ties, stiffeners, packing, diaphragms, shop rivets / welding, T&F bolts, drifts, shop welds, templates, jigs, fixtures, back up supports, accessories, transporting various components from fabrication shop to site, including loading, unloading, lift and taxes complete, assembly of girders on drifts/bolts, field riveting/welding, 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, grouting holes in the bed block for fixing of HD bolts/anchor pins of bed plates, all temporary arrangements. Load testing may be done under Chapter-22. The bearing sets to be provided with the girders will be paid separately as per relevant item separately.					
		Payment Schedule					
		(i) Material at site - 40%					
		(ii) Fabrication at site - 15%					
		(iii) Erection/Launching - 20%					
		(iv) Completion incl. painting & finishing - 25%					
(a)	211011	Plate Girder/Semi Through Girder	1	MT	450	78,585.50	35,363,475.78
2	211040	Fabricating, supplying and fixing of 6mm to 8mm thick steel chequered plate conforming to IS:3502 for pathway, trolley refuges, floor for the bridge including fixing the same over steel channel sleepers by drilling holes in channel sleepers and trolley refuges including nuts & bolts, tools & plants, labour as a complete job	1	MT	24	98,435.23	2,362,445.52
3	211060	Providing and fixing 65/50 mm nominal dia B class G.I. pipe railing used in rows for footpath or anti-crash barrier railing including cost of M.S. angle and channels in vertical posts, riveting, welding / riveting, priming painting two coats, at all heights labour and material as a complete job	1	Kg	400	72.95	29,180.00
4	211080	Providing/fixing/leaving/grouting various size HTS bolts / holding down bolts in concrete column or in other structural steel member with proper nuts, bolts, washers/plates as a complete job. Note - Cement used in grouting will be paid separately under relevant item.	1	Kg	160	79.04	12,646.40

SN	USSOR-2012ECR	Description	unit		Qty	Rate	Amount
5	211090	Providing, cutting, fabricating, treating, fixing & painting structural steel conforming to IS:2062 in access ladders, inspection platforms, Trolley refuge, railing etc. joints welded to neat finish including one coat of primer & two coats of synthetic enamel paints	1	MT	80	65,495.70	5,239,656.00
6	211140	Supplying, fitting and fixing in position true to line and level POT-PTFE bearing 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 drawing and approved Technical Specifications. The design of the bearings shall be submitted by the manufacturers/contractor and got approved from Railway before fixing. Test report of the bearings should be got approved before the materials are lifted from the manufacturer premises. Payment is based on 250 MT capacity of Bearing.			0		
(a)	211141	POT-PTFE Bearing	1	MT Bearin g Capaci ty	5700	412.94	2,353,758.00
		Sub-Total					45,361,161.70



Name of work:-Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandi-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway

SCH-B-VIII							
SN	USSOR-2012 ECR	Description	unit		Qty	Rate	Amount
1	238020	Providing and laying Dense Bituminous concrete on prepared surface with specified graded stone aggregate for wearing course, mixing of bitumen, filler & stone aggregate in hot mix plant, transporting the mixed material and laying with mechanical paver finisher fitted with electronic sensing device to the required level and grade and rolling with road rollers, as per specification to achieve the desired density and compaction, but excluding cost of primer / tack coat					
(a)	238021	40mm/50mm compacted thickness with bitumen of grade 60/70 @ 6.5% and lime @ 3% by weight of total mix	1	cum	233	9,261.19	2,157,857.27
2	238030	Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/25 conforming to IS:702 prepared by using mastic cooker and laid to required level and slope including providing antiskid surface with bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005cum per 10sqm and at approximate spacing of 10cm centre to centre in both directions, pressed into surface protruding 1mm to 4mm over mastic surface, including cleaning the surface, removal of debris etc. all complete. (considering bitumen using 10.2% as per MORTH specification)					
(a)	238031	25mm thick	1	Sqm	4,675	726.50	3,396,387.50
3	237010	Providing and fixing Cat's Eye (Glow studs) heavy integral stem, reflective, aluminium die cast with elegant finish of size 100mmx100mm and 20mm high having a stem of 50mm (or 12mm dia. 90mm long) screwed and nailed to fix into the road surface or at the nosing of the central verge. The road studs should have reflectors fitted on one side of the studs (3 nos. 7 element or 1 no. 29 element reflector) complete	1	Each	80	553.51	44,280.80
4	236070	Painting road surface marking with adequate number of coats to give uniform finish with ready mixed road marking paint conforming to IS:164, on bituminous surface in white/yellow shade including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete					
(a)	236071	New work (minimum two coats)	1	Sqm	150	86.66	12,999.00
		Sub-Total					5,611,524.57

Name of work:-Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandia-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway

SCH-B-XII

SN	USSOR-2012 ECR	Description	unit		Qty	Rate	Amount
1		Any items of USSOR 2012 of EC Rly, which are not covered in above schedule - A, Schedule B-I to B-VIII, Schedule C-I & C-II,	% above or %below	LS amount			2,500,000.00
		Sub-Total					2,500,000.00



Name of work:-Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandia-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway

SCH-C-I							
SN	USSOR-2012 ECR	Description			Qty	Rate	Amount
1	033060	Supplying and using Cement at worksite:					
(a)	033061	Ordinary Portland Cement Grade -43	1	MT	5,110	6,631.36	33,886,249.60
		Sub-Total					33,886,249.60



Name of work:-Construction of Railway Spans and adjacent Viaduct Spans of 04 Nos. ROBs (excluding approaches) in lieu of level crossing No. 41/C/E at IR Chainage 569/19-17 between Karwandia-Sasaram (clear span 1x60 M + 1x18 M), No. 46C/T IR Chainage 581/1-3 Kumhau-Shivsagar (clear span 1x18 M 1x60 M + 1x18M), No. 49C/T IR Chainage 586/21-23 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) and No. 50 C/E IR Chainage 588/25-27 Shivsagar-Khurmabad (clear span 1x18 M 1x60 M + 1x18M) of Mughalsarai division of East Central Railway

SCH-C-II

SN	USSOR-2012 ECR	Description	unit		Qty	Rate	Amount
1	045010	Supplying reinforcement for RCC work including straightening, cutting, bending, placing in position and binding all complete:					
(a)	045016	Thermo-Mechanically Treated Bars 500D	1	KG	1,480,000	64.46	95,400,800.00
		Note: The contractor shall quote the rate for TMT Bars of Grade 500D					
		Sub-Total					95,400,800.00



Explanatory Notes for BOQ:

- (i) Contractor shall quote rates of shuttering and curing for all heights.
- (ii) The rates of reinforcement item mentioned in the above schedule include placing of reinforcement under running traffic conditions.
- (iii) All ECR USSOR items contain item nos., if any discrepancy is found in nomenclature, schedule nomenclature will prevail.
- (iv) Tenderer must quote their rates for supply and erection of fabricated girders with their own material including loading, transportation and unloading at site. DFCCIL shall not provide any assistance for procurement of raw material for manufacturing the girders tendered for.
- (v) The rates shall also be inclusive of all taxes legally leviable and / or any other taxes, license fee and royalty charges etc. if any.
- (vi) The above quantity is approximate:-The DFCCIL reserve the right to increase / decrease the same.
- (vii) The contractor has to submit launching scheme and detailed drawing of each component of the Railway safety and nothing extra shall be paid for this activity.

