



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



IRCON/2056/AANRLP/Tender/ Retrofitting of PTB / 257/1009

Dated: 03.11.2023

M/s Sanrachana Structural Strengthening Pvt. Ltd.

103 104 MonaLisa Chs Hari Niwas Circle

Thane West- 400602

Email: ashish@sanrachana.in

(Letter Of Acceptance)

Sub: Sub-Soil/foundation Stabilization using Flyash /Cement grouting and Retrofitting of Passenger Terminal Building (PTB) in Nischintapur Yard at Agartala in connection with Agartala- Akhaura New Rail Link Project- **Letter of Acceptance.**

Ref: 1. NIT No. IRCON/ 2056/ AANRLP/ Tender/ Retrofitting of PTB/ 257 dated 09.10.23
2. Financial bid opened on 19.10.2023.

Dear Sir,

With refernce to above, please be informed that your offer for the subject work has been acceptedat total cost of **INR 2, 54, 52,068.00 (Rupees Two Crore Fifty-Four Lakh Fifty Two Thousand & Sixty-Eight only)** inclusive of all taxes and Duties (GST etc.) as per BOQ attached at Annexure-A with a completion period of **Three Months** from the date of issue of this letter of acceptance and terms &condition as stipulated in tender documents.

1. Scope of work: The Scope of work covered under this work shall be as per clause 4.0 of SCC.

2. In terms of Clause 8.0 of SCC, you are requested to submit a Performance Guarantee (P.G.) in the form of irrevocable bank guarantee as per the Performa given as Annexure-IX of SCC from any Scheduled Bank for an amount of 5 % (Five Percent) of the contract value i.e., **Rs. 12, 73,000.00 (Rupees Twelve Lakh Seventy-Three Thousand only) within 21 days from the date of issue of LOA.** Alternatively, the performance security can be furnished by the Contractor in the form of Fixed Deposit Receipt (FDR) from a scheduled bank endorsed in favour of IRCON INTERNTIONAL LIMITED.



3. Your kind attention is invited to the provision of clause 17.0 of SCC. You are required to submit/ comply the following:

- i. **In terms of clause 17 (I) of SCC:** The Contractor shall submit the programme for completion of work to the Engineer for his approval within 7 days from the date of receipt of letter of acceptance considering completion period as indicated in Key Information Table (KIT) in Para 1.1 of e-Procurement Notice. Unless otherwise directed, the programme shall be in the form of Bar-Chart showing proposed execution of quantities of principal items of work. The programme shall be related to the capability of equipment proposed to be deployed and site conditions. Programme so submitted and agreed by IRCON will become part of the contract agreement. The Contractor shall also provide in writing methodology for execution of major items of work as desired by the Engineer. The submission and approval of such programme shall not relieve the Contractor of any of his duties or responsibilities or obligations under the contract. The Engineer shall have full power and authority during the progress of work, to issue such instructions as may be necessary for the proper and adequate execution of the work.
- ii. **In terms of clause 17 (II) of SCC:** Within 7 days of award of contract, the Contractor shall submit to IRCON for approval a Detailed Supply/Completion Programme with Milestones/Key dates based on completion period as indicated in Key Information Table (KIT) in Para 1.1 of e-Procurement Notice of the Tender. These shall be incorporated in the Contract Agreement after approval by Engineer in charge.
- iii. **In terms of clause 17 (III) of SCC:** Within 7 days of award of contract, the contractor shall also submit resource deployment program i.e. key personnel, manpower, Plant & Machinery and Other resources deployment program. These shall be to be incorporated in the Contract Agreement after approval by Engineer in charge.
- iv. **In terms of clause 17 (IV) of SCC:** Within 7 days of award of contract, the contractor shall also submit Cash flow statement and cumulative monthly progress plan (in the form of S curve). These shall be to be incorporated in the Contract Agreement after approval by Engineer in charge.
- v. **In terms of clause 17 (V) of SCC:** Within 7 days of award of contract, the Contractor shall submit to IRCON Method statement for various activities and Quality Assurance Plan (QAP) and start the work after their approval.
- vi. **In terms of clause 17 (VI) of SCC:** Within 7 days of the award of the contract, the contractor shall submit to IRCON, Organization chart of the project with the CV of the key personnel's to be deployed at the project site. The scrutiny of the same will be done by the IRCON and will be approved by the Engineer.



4. Quantity Variation:

Quantity variation shall be dealt as per the SCC cl. no. 35 and clause no 42 of Indian Railway General Condition of Contract April' 2022.

5. Taxes and duties:

The quoted rates shall include all the taxes, duties etc. Income tax on works contract shall be deducted from the payments to the contractors as per the prevailing tariff for which necessary TDS Certificates shall be issued. The taxes and duties shall be dealt under clause no. 42.2 of SCC.

6. Completion Period:

The work is required to be completed within a continuous period of **Three months** from the date of issue of letter of acceptance as per clause no 10 of SCC. The work has to be executed in co-ordination with other agencies working on or near the project.

7. Liquidated Damages:

Liquidated Damages shall be dealt as per the clause no.46.8 of SCC.

8. Defect Liability period:

Defect liability period shall be dealt as per the clause no 45 of SCC.

9. Insurance:

As per, the clause no. 11 of SCC, you have to obtain contractor's All Risk Policy for the works In the Joint name of IRCON and Yourself.

10. Contract agreement:

The contractor shall enter into and execute the Contract Agreement within 28 days after the date of issue of Letter of Acceptance as per clause 14 (V) of SCC.

- 11.** This letter of acceptance, along with your submitted offer shall constitute a binding contract between you and IRCON International Limited, till a formal agreement is drawn and executed.



12. This letter of acceptance (bearing SN IRCON/ 2056/ AANRLP/ Tender/ Retrofitting of PTB/ 257/ 1009 Dated: 03.11.2023) is being issued in duplicate and it is requested to return one copy of this letter of Acceptance duly accepted, signed and stamped of each page by authorized representative of M/s Sanrachna Structural Strengthening Pvt. Ltd.
13. You are requested to mobilize the resources to commence the works at site and contact Jt. General Manager/ HQ/ IRCON/ Agartala for further instructions.

Thanking You,
Yours Sincerely,

For & on behalf of,
Northeast Frontier Railways


General Manager/ PH
Ircon International Limited



D/A: BOQ at Annexure- A

CC: 1. Chief General Manager/ Works- I/ CO
2. Chief General Manager/ Design/ CO
3 Joint General Manager/ HQ
4. Manager/ F& A

BILL OF QUANTITIES (BOQ)							
Name of Work: Sub-Soil/ Foundation Stabilization using Flyash/Cement grouting and Retrofitting of Passenger Terminal Building (PTB) in Nischintapur Yard at Agartala in Connection with Agartala-Akhaura New Rail Link Project							
TSR 2023 Item No.	Page No.	BOQ Item No.	Description of Item	Unit	Quantity	Rate with 18% GST	Amount
Schedule-1: SOR							
		A	FOR SOIL STABILIZATION-GROUTING WORK				
			BORING				
			Boring/drilling bore well of required dia for casing/strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level.				
			All kinds of soil				
22.1.1.1	SH22-P3	1	300 mm dia	metres	6,000.00	614.70	36,88,200.00
			PERFORATED PVC PIPE				
			Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.				
22.3.1	SH22-P4	2	100 mm nominal size dia	metres	6,000.00	669.40	40,16,400.00
		B	FOR RETROFITTING				
			DISMANTLING & DEMOLITION				
			Demolishing brick work including stacking of serviceable materials and disposal of unserviceable materials with all lifts and upto a lead of 50m etc. complete as per direction of the Engineer- in-charge:-				
14.7.3	SH14-P3	3	In cement mortar	cum	40.00	1,145.40	45,816.00
			Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :				
14.9.2	SH14-P3	4	Of area beyond 3 sq. metres	each	5.00	293.70	1,468.50



BILL OF QUANTITIES (BOQ)						
Name of Work: Sub-Soil/ Foundation Stabilization using Flyash/Cement grouting and Retrofitting of Passenger Terminal Building (PTB) in Nischintapur Yard at Agartala in Connection with Agartala-Akhaura New Rail Link Project						
TSR 2023 Item No.	Page No.	BOQ Item No.	Description of Item	Unit	Quantity	Rate with 18% GST
14.15	SH14-P4	5	Dismantling steel work in built up section in channels, angles, tees, flats including all gusset plates, bolts, nuts, cutting rivets, welding including dismembering and stacking of serviceable materials and unserviceable materials separately with all lifts and upto a lead of 50 m etc. complete as per direction of the Engineer- in-charge.	Kg	500.00	3.10
14.21	SH14-P4	6	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	Sqm	150.00	144.40
14.33	SH14-P6	7	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-charge.	Sqm	45.00	31.10
			CHIPPING OF CONCRETE			
			Chipping of unsound/weak concrete material from slabs, beams, columns etc. with manual Chisel and/ or by standard power driven percussion type or of approved make including tapering of all edges, making square shoulders of cavities including cleaning the exposed concrete surface and reinforcement with wire brushes etc. and disposal of debris for all lead and lifts all complete as per direction of Engineer-In-Charge			
17.30.2	SH17-P15	8	50mm average thickness	Sqm	500.00	184.40
			EXCAVATION			
			Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m. as directed by Engineer-in-charge.			
2.12	SH02-P4	9	All kinds of soil	cum	300.00	179.90
			SOIL BACKFILLING			
2.16	SH02-P4	10	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 upto 1.5 m.- All Kinds of Soil	cum	270.00	161.30
						43,551.00



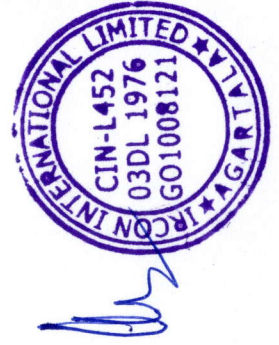
BILL OF QUANTITIES (BOQ)							
Name of Work: Sub-Soil/ Foundation Stabilization using Flyash/Cement grouting and Retrofitting of Passenger Terminal Building (PTB) in Nischintapur Yard at Agartala in Connection with Agartala-Akhaura New Rail Link Project							
TSR 2023 Item No.	Page No.	BOQ Item No.	Description of Item	Unit	Quantity	Rate with 18% GST	Amount
			RCC WORK Providing and laying in position ready mixed concrete manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced concrete work including pumping of RMC from transit mixer to site of laying but excluding the cost of centring, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per the direction of Engineer-in-Charge. (Note :- Cement content considered in this item is @ 418 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately).				
			All work upto Plinth level				
5.35.1.1	SH05-P13	11	Reinforced cement Concrete grade M-25 using 418 Kg of Cement per cum	cum	60.00	13,520.70	8,11,242.00
			Extra for providing richer mixes at all floor levels				
5.36.1	SH05-P14	12	Providing M-30 grade of concrete instead of M-25 grade of concrete B.M.C/R.M.C	cum	60.00	203.10	12,186.00
5.37	SH05-P14	13	Add for using extra cement or deduct for using less cement in the items of design mix over and above the specified cement content therein.	quintal	19.20	985.60	18,923.52
			CENTERING & SHUTTERING				
			Centering and shuttering including strutting, propping etc. and removal of form for				
5.8.3	SH05-P7	14	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc. using shuttering ply	Sqm	600.00	496.10	2,97,660.00
			REINFORCEMENT STEEL				
			Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above/ below plinth level.				
5.19.4	SH05-P10	15	Thermo-Mechanically Treated bars of grade Fe-500D or more	Kg	12,000.00	103.90	12,46,800.00



BILL OF QUANTITIES (BOQ)							
Name of Work: Sub-Soil/ Foundation Stabilization using Flyash/Cement grouting and Retrofitting of Passenger Terminal Building (PTB) in Nischintapur Yard at Agartala in Connection with Agartala-Akhaura New Rail Link Project							
TSR 2023 Item No.	Page No.	BOQ Item No.	Description of Item	Unit	Quantity	Rate with 18% GST	Amount
			EPOXY BOND COAT				
			Providing, mixing and applying bonding coat of approved adhesive on chipped portion of RCC as per specifications and direction of Engineer-In-charge complete in all respect.				
17.33.2	SH17-P16	16	Epoxy bonding adhesive having coverage 2.20 sqm/kg of approved make	Sqm	200.00	499.30	99,860.00
			FIXING OF GALVANISED STEEL INJECTION NIPPLES / NOZZLES FOR LOW VISCOUS EPOXY GROUT				
17.42	SH17-P18	17	Providing and inserting 12mm dia galvanised steel injection nipple in honey comb area and along crack line including drilling of holes of required diameter (20mm to 30mm) up to depth from 30mm to 80mm at required spacing and making the hole & crack dust free by blowing compressed air, sealing the distance between injection nipple with adhesive chemical of approved make and allow it to cure complete as per direction of Engineer-In-Charge.	each	400.00	228.20	91,280.00
		18	Any unforseen item as per Tripura PWD SOR 2023 (Building)	LS			10,00,000.00
		(a)	TOTAL COST FOR SCH-1				1,15,44,167



BILL OF QUANTITIES (BOQ)						
Name of Work: Sub-Soil/ Foundation Stabilization using Flyash/Cement grouting and Retrofitting of Passenger Terminal Building (PTB) in Nischintapur Yard at Agartala in Connection with Agartala-Akhaura New Rail Link Project						
TSR 2023 Item No.	Page No.	BOQ Item No.	Description of Item	Unit	Quantity	Rate with 18% GST
Schedule-2: Non-SOR items						
		BOQ Item No.	Description of Item	Unit	Quantity	Rate with 18 % GST
						Amount
		A	FOR SOIL STABILIZATION-GROUTING WORK			
			SAND PACKING			
		1	supplying of fine sand and filling/ packing it in the bores as per requirement, all complete as per direction on Engineer-in-charge.	cum	300	2,365.28
			PRESSURE GROUTING			
		2	Pressure grouting through PVC pipes at variable pressure starting with 1Kg/Sqcm increasing upto 3Kg/Sqcm. Charges of all labour, equipments, tools,plants & machineries required for the job. Cost of flyash and cement to be paid as per actual consumption	Nos.	300	4,094.40
		3	Providing flyash having calcium content as specified	tonne	300	3,089.97
		4	Providing Cement (OPC 43 grade)	tonne	30	9,668.03
						9,26,991.00
						2,90,040.90
		B	FOR RETROFITTING			
			PROPPING & SUPPORTING			
		5	Propping: Providing, fabricating & erecting temporary supports to carry safe load of 100kN or more to the structural members like beams, slabs etc. to relieve the load on the members during breaking of damaged concrete, removal guiniting, excavation or any dismantling work as per the instruction of engineer in-charge/consultant. These supports shall be provided either in the form of props or trestles fabricated using structural steel as per the requirement and as per the instruction of EIC/Consultant. Item rate is inclusive of the materials, all labour, supervision, tools and tackles and transportation etc., complete as per specification and as directed. (Rate for this item is for propping duration for maximum 30 days from erection at a location for each support)	each	300	288.07
						86,421.00
		2	REBARRING			



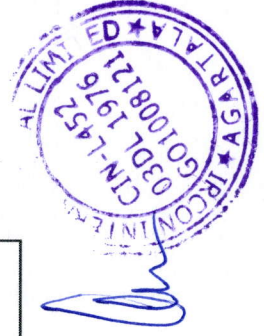
BILL OF QUANTITIES (BOQ)							
Name of Work: Sub-Soil/ Foundation Stabilization using Flyash/Cement grouting and Retrofitting of Passenger Terminal Building (PTB) in Nischintapur Yard at Agartala in Connection with Agartala-Akhaura New Rail Link Project							
TSR 2023 Item No.	Page No.	BOQ Item No.	Description of Item	Unit	Quantity	Rate with 18% GST	Amount
			For Shear Connector/Ties/Stirrups: Supply and fixing of shear connectors/ties/stirrups using rebars of designated dia for column/beam/Shear walls etc at designed embedment length wherever required , including power drilling, cleaning of holes, then rebars should be inserted in holes that should be filled with FIS V Plus of Fischer or equivalent, a hybrid rebarring chemical with ETA approval, DIBt, approved for diameter range from 8 mm to 32 mm reinforcement bar as per manufacturer's specification as per the direction of Engg In-charge. Drilling of hole should be done upto provided embedment depth as per the design from manufacturer approved by EnC, followed by cleaning with blow pump, wire brush and blow pump for 4 times, complete as per the manufacturer's methodology. The chemical shall have tested service life of 50years as per ETA. Cost of providing, cutting, bending of rebar shall be paid separately as per approved item.				
		6	For 8mm x 90mm	each	2800	225.78	6,32,184.00
		7	For 10mm x 120mm	each	1200	282.23	3,38,676.00
		8	For 12mm x 140mm	each	50	297.80	14,890.00
			Rebar For Main Reinforcement: Supply and fixing of main reinforcement using rebars of designated diameter for column/beam/Shear walls/Foundations at designed embedment length wherever required , including power drilling, cleaning of holes, then rebars should be inserted in holes that should be filled with FIS EM Plus of Fischer or equivalent, a heavy duty pure epoxy based rebarring chemical with ETA approval, DIBt, approved for diameter range from 8 mm to 40 mm reinforcement bar as per manufacturer's specification as per the direction of Engg In-charge. Drilling of hole should be done upto provided embedment depth as per the design from manufacturer approved by EnC, followed by cleaning with blow pump, wire brush and blow pump for 4 times, complete as per the manufacturer's methodology. The chemical shall be approved for diamond-drilled and water-filled drill holes as well as seismic applications in performance categories C1, C2 for rebar connections. Product shall have test certificate for 120years of service life & shall have ETA complying to EAD 332402-00-0601-v01. Cost of providing, cutting, bending of rebar shall be paid separately as per approved item.				
		9	For 12mm x 140mm	each	1000	292.93	2,92,930.00
		10	For 16mm x 180mm	each	1000	486.60	4,86,600.00
		11	For 20mm x 220mm	each	20	762.02	15,240.40
		12	For 25mm x 300mm	each	20	1,538.63	30,772.60
			LOW VISCOUS EPOXY GROUT				



BILL OF QUANTITIES (BOQ)							
Name of Work: Sub-Soil/ Foundation Stabilization using Flyash/Cement grouting and Retrofitting of Passenger Terminal Building (PTB) in Nischintapur Yard at Agartala in Connection with Agartala-Akhaura New Rail Link Project							
TSR 2023 Item No.	Page No.	BOQ Item No.	Description of Item	Unit	Quantity	Rate with 18% GST	Amount
			Providing and injecting approved grout in proportion recommended by the manufacturer into cracks/honey-comb area of concrete/masonry by suitable gun/pump at required pressure including cutting of nipples after curing etc. complete as per directions of Engineer-in-Charge. (The payment shall be made on the basis of actual weight of approved grout injected.) Epoxy injection grout in concrete/RCC work of approved make	Kg	120	1,669.08	2,00,289.60
			CEMENTITIOUS PRESSURE GROUT				
		14	Providing and Injecting non-shrink cement grout with OPC cement slurry (with slurry mix would have around 16-18 liter water and CEBAX 100 or equivalent non-shrink compound dose as per manufacturer per Bag of 50Kg of Cement) at pressure upto 4 Kg / Sq cm. Grouting to be done till the nozzle refuses to accept the grout. Measurement shall be done for nozzle points. The rate includes the cost of nozzle and its fixing grout material etc. complete.	Nos.	800	434.76	3,47,808.00
		4	MICROCONCRETE				
		15	Microconcrete with 6mm aggregates : Application of repair Micro-concrete of minimum M40 grade with 25% aggregate of 6mm dia. of approved make for making up lost section of concrete or for increasing of cross section for thickness above 75 mm, after the application of bonding agents to ensure stability of the concrete, followed by water curing for at least 7 days. The rates are inclusive of all materials, labor, machinery, equipment, tools, tackles, etc., all complete. The microconcrete shall be free flow, self compacting & should not require any vibratory compaction. Payment shall be made on the basis of consumed dry material of microconcrete and payment for bonding agents will be done through separate BOQ item. The cost chips is considered to included in the item rate.	Kg	20000	54.50	10,90,000.00
		16	Repair with Microconcrete without aggregates : Application of repair Micro-concrete of minimum M40 grade of approved make for Making up lost section of concrete for thickness less than 75 mm, after the application of bonding agents to ensure stability of the concrete, followed by water curing for at least 7 days. The rates are inclusive of all materials, labor, machinery, equipment, tools, tackles, etc., all complete. The microconcrete shall be free flow, Self compacting & should not require any vibratory compaction. Payment shall be made on the basis of consumed dry material of microconcrete and payment for bonding agents will be done through separate BOQ item.	Kg	12000	43.79	5,25,480.00
			POLYMER MODIFIED MORTAR (READY TO USE)				



BILL OF QUANTITIES (BOQ)							
Name of Work: Sub-Soil/ Foundation Stabilization using Flyash/Cement grouting and Retrofitting of Passenger Terminal Building (PTB) in Nischintapur Yard at Agartala in Connection with Agartala-Akhaura New Rail Link Project							
TSR 2023 Item No.	Page No.	BOQ Item No.	Description of Item	Unit	Quantity	Rate with 18% GST	Amount
		17	Rebuilding the section of structural damaged RCC elements to its original size or as per consultants recommendations in thickness up to 30mm in 2 layers of 10 mm and 15mm each by providing and applying with pre-batched, one component fiber reinforced cementitious patch repair mortar. Dual Shrinkage expansion, fibre reinforced, single component, polymer modified, cementitious, repair mortar system supplied as a ready to use blend of dry powders, which requires only the addition of clean water to produce a highly consistent, repair mortar suitable for structural concrete and masonry repairs. Make Sika, Fosroc or equivalent. complete as per direction of Engineer-in-charge.	Sqm	400	3,014.00	12,05,600.00
			CRACK REPAIR & TREATMENT				
		18	Crack Repair: Making 'V' groove of 10 mm wide and 10 mm deep over crack line by electrically operated angle grinder with diamond concrete saw blade and cleaning it by air blower as directed by Engineer-in-charge.	rmt	200	112.89	22,578.00
		19	Crack Filling : Supply and apply solvent free, moisture insensitive epoxy resin based patch repair putty on vertical surfaces. Product requirements: suitable for submerged condition; compressive strength of 40 N/mm2 (1 day) according to IS 9162-1979.	rmt	200	247.19	49,438.00
			CFRP (CARBON FIBRE REINFORCED POLYMER)				
			WRAP				
		20	Structural Strengthening with Carbon Fiber Wrap 230 GSM & Epoxy Adhesive : Supply and apply a stitched, one directional, high strength 230 GSM CFRP fabric in single layer over RCC member as per specification after surface preparation by rounding off sharp edges to 25 mm radius and cleaning it properly including thixotropic epoxy based impregnating resin Wrapping the CFRP fabric to RCC member at desired orientation using tamping rollers to avoid any air voids etc. and sprinkling sand over it as per direction and satisfaction of Engineer-in-charge. Epoxy and CFRP shall be from same manufacturer, Epoxy shall have durability test reports to the level of satisfaction of Engineer-in-charge. CFRP product used shall have minimum requirements: Tensile strength (nominal) = 4900N/mm2; Tensile E – modulus = 250000 N/mm2; elongation at break (nominal): 2.1%; fabric design thickness = 0.127 mm.	Sqm	400	4,935.10	19,74,040.00



BILL OF QUANTITIES (BOQ)							
Name of Work: Sub-Soil/ Foundation Stabilization using Flyash/Cement grouting and Retrofitting of Passenger Terminal Building (PTB) in Nischintapur Yard at Agartala in Connection with Agartala-Akhaura New Rail Link Project							
TSR 2023 Item No.	Page No.	BOQ Item No.	Description of Item	Unit	Quantity	Rate with 18% GST	Amount
			LAMINATES				
			Carbon laminates:supplying and applying 1.4mm thick, 50 & 100 mm wide carbon laminate sheet of approved makes or specified in the drawing/ details following the steps and specification given below: Surface preparation:Grinding concrete substrate, cleaning it with wire brush removing oil, laitance if present, etc. complete. Profiling: Applying compatible primer on prepared substrate, Filling the holes and uneven surface with high strength epoxy putty etc. complete. Laminate fixing: Applying first coat of Saturant, cutting the carbon laminate sheet (1.4mm thick , 50mm wide) to size, fixing the laminate sheet to structural element at desired orientation using tamping roller to avoid any air voids etc. complete. Quartz Sand Sprinkling: Applying second coat of Saturant after min. 12 hrs, rectify air voids, if any, and sprinkle the quartz sand on it to make surface rough to take any further finishes.				
		21	50mm wide 1.4 thk. Laminate	rmt.	500	2,611.10	13,05,550.00
		22	100mm wide 1.4 thk. Laminate	rmt.	500	5,074.26	25,37,130.00
		23	Boring through all types of soil (Excluding boulder and rock) with 150mm dia casing by winch and rope set up as per IS: 1892-1979 for taking N-Value at an interval of 1.5 metre or change in strata whichever is earlier as per IS: 2131:1981. Undisturbed & disturbed sample as applicable will be collected at every change of strata along with water table recording. The borehole shall be terminated at the depth of 22 m at each location. Laboratory test will be done for Engineering Classification, Bulk density, Natural moisture content, Sieve and Hydrometer Analysis, Atterberg Limits, Specific gravity, free swell index, Tri-axial test/ Box shear test, Consolidation test as per IS 2720. Chemical analysis of Soil and Water obtained from the test location.	Mtr	200	1,180.00	2,36,000.00
		24	Supervision Cost of Consultant for execution of the work given in the BOQ	Man-day	90	7,788.00	7,00,920.00
		(b)	TOTAL COST FOR SCH-2				1,52,47,484
			Total basic amount including GST (a+b)				2,67,91,650
			Discount given by the agency @ 5 %				-13,39,583
			Net Amount Quoted by the agency				2,54,52,068
			Amount in Word: Two Crore Fifty-Four Lakh Fifty-Two Thousand and Sixty-Eight Only				

Signature Not Verified

Digitally signed by SANKARJIT
SUKLABAIDYA

Date: 2024.08.01 18:48:39 IST

Location: eProcurement System for
Central PSUs



[Handwritten signature]