


COMPLIANCE REPORT OF POINT-1 OF ADDITIONAL
INFORMATION

PROPOSAL NO - FR/RJ/IND/153357/2022

' PROJECT REPORT '

ANNEXURES

S. No.	Description	Annexures
1	Authorized consultants' letter	Annexure - I
2	Concept Plan for Railway siding	Annexure - II
3	In-principle approval letter	Annexure - III
4	Engineering Scale Plan - Sonu station	Annexure - IV
5	Longitudinal section of siding	Annexure - V
6	Engineering Scale Plan - In-plant yard	Annexure - VI
7	Schematic signaling Plan	Annexure - VII
8	Schematic sectioning cum wiring diagram	Annexure - VIII
9	Estimate - Civil and P.way works	Annexure - IX
10	Estimate - S&T works	Annexure - X
11	Estimate - TRD works	Annexure - XI


(Rajendra Bora) 12/5/2022
General Manager (Mines)
Wonder Cement Limited
Jaisalmer Project

No. WCL/HO/C/SONU/01

Dt. 28.09.2021

To,

CPTM,
North Western Railway,
Head Quarters Office, Jaipur.

Sub: Appointment of Authorized consultants for conducting survey, Preparation of Feasibility Study Report & Detailed Project Report, Detailed Engineering services and Project Management Consultancy for proposed Private Siding to serve for Cement plant proposed by M/s Wonder Cement at Village Parewar Distt. Jaisalmer State Rajasthan, siding taking off from Sonu Station on Thaiyat Hamira – Sonu Section on Jodhpur Division of North Western Railway.

Dear Sir,

Wonder Cement Limited (WCL) is planning to setup an Integrated Cement Plant, located in Near Parewar Village, Teshil & Dist.: Jaisalmer, Rajasthan State with clinker production capacity 1.30 MTPA in Phase-I & 3.30MTPA in Phase-II, Cement Production capacity 0.50 MTPA, High grade limestone mine 1.50 MTPA and inward raw materials of Coal 0.60 MTPA and Condition Fly ash 0.60 MTPA. M/s.WCL planning to develop Railway siding with in their plant premises in order to transport inward raw materials of Coal & Condition Flyash and outward traffic of Clinker, High grade Lime stone and Cement. Siding is proposed to take-off from the nearest Rail head i.e. Sonu on Thaiyat Hamira – Sonu Single line non-electrified section of Jodhpur Division, North Western Railway

In this connection, from now onwards we have appointed **M/s.MGR Infra Techno Economical Services LLP (MGRITES), 1408, 14th floor, Hemkunt Chambers, Nehru Place, New Delhi – 110019** with Telephone Nos.+91 -9959215798 & +91-8826692829 and E-mail id: mgrinfratech@mgrites.com, mcsreddy@mgrites.com as Railway consultants for railway siding. They are in the panel of authorized consultants on North Western Railway vide letter No. W-623/1/Reg. Consult. /MGR Infra, dated.15.10.2019, valid upto 09.10.2022.

The agency will act on behalf of us for doing Survey, submission of Reports, designs/drawings, detailed engineering services and project management consultancy for obtaining the approvals from Railways till commissioning of siding.

We request for providing necessary guidance and co-operation to our consultants.

Thanking you.

Yours faithfully,

Wonder Cement Limited
Jaisalmer Project
(Authorized Signatory)
For M/s Wonder Cement Ltd.

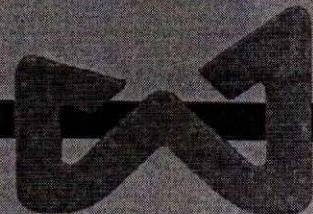
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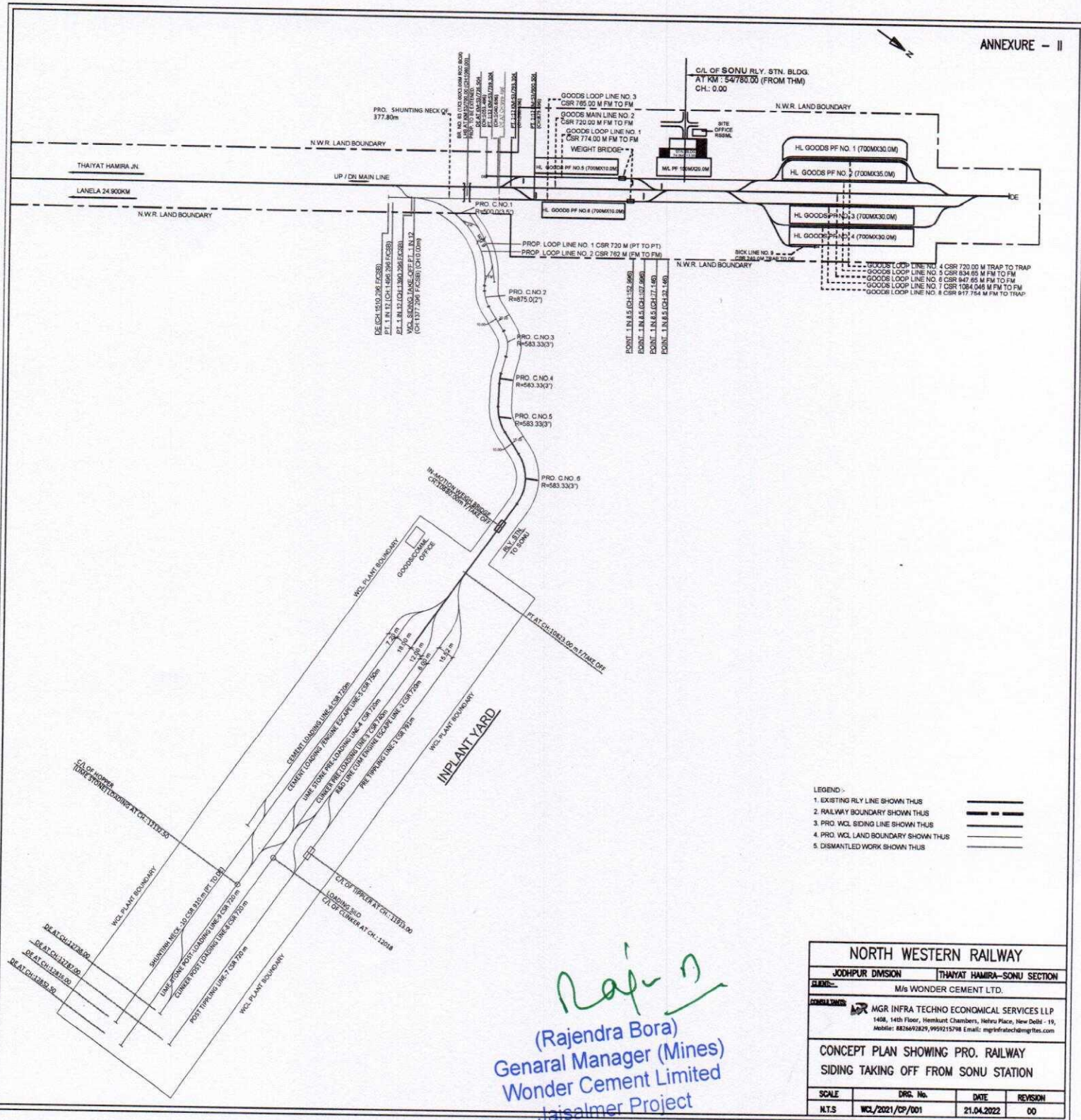
Rajendra Bora
(Rajendra Bora)
General Manager (Mines)
Wonder Cement Limited
Jaisalmer Project

WONDER CEMENT LIMITED

Works Office: R. K. Nagar, Tehsil - Nimbahera - 312 601, District - Chittorgarh, Rajasthan (India)
Tel: +91-1477-277777, Fax: +91-1477-277333, E-mail: plant.nbh@wondercement.com

Registered Office: Makrana Road, Madanganj, Kishangarh - 305 801, District - Ajmer, Rajasthan (India)
Telefax: +91-1463-260151, E-mail: regd.office@wondercement.com, Website: www.wondercement.com





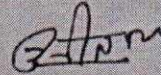
North Western Railway

Letter No. MT-6B/Plg/Wonder Cement/2021
Dated- 28/01/2021

M/s. MGR Infra Techno Economical Services LLP
(MGRITES),
1408, 14th floor, Hemkunt Chambers,
Nehru Palace,
NEW DELHI- 110019

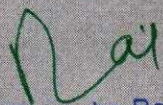
Sub- New Private Railway Siding for Cement Plant by M/S Wonder Cement Ltd., taking off from Sonu station of THM-SONU section of JU division.
Ref- MGRITES/WCL/SONU/21-22 Dated- 24.12.2021

In reference to above cited subject, Competent authority has grant In Principal Approval (IPA) for construction of new private railway siding for cement plant of wonder cement ltd., taking off from sonu station of THM-SONU section of JU division, as per policy "GATI SHAKTI MULTI MODAL CARGO TERMINAL" (GCT). May please required to be submitted your detail project report (DPR) along with ESP of serving station as per Para 5 of Schedule '1' of "GATI SHAKTI MULTI MODAL CARGO TERMINAL" (GCT) with in stipulated period.

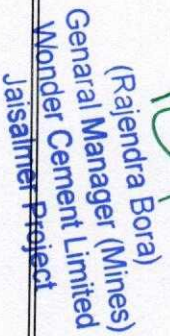


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NWR-JU

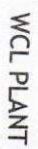
Copy- CTPM/HQ Office/NWR
- Wonder Cement Ltd.
17, Old Fatehpura, Near Seva Mandir,
Udaipur- 313004.



(Rajendra Bora)
General Manager (Mines)
Wonder Cement Limited
Jaisalmer Project



12/2/20

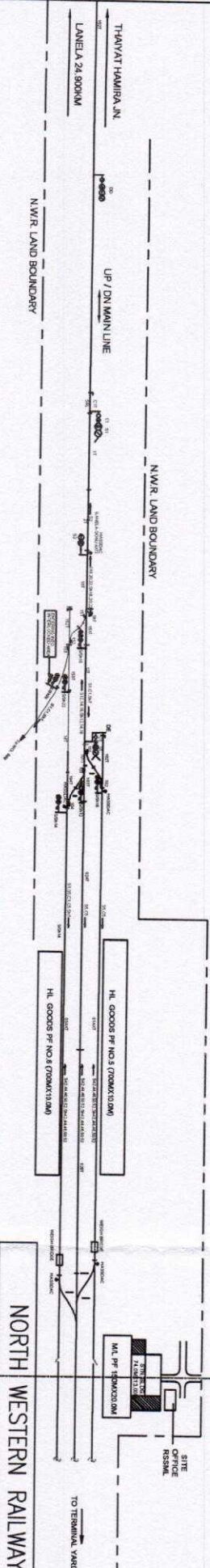


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10/10/10	JOHN DOE	5	85	85%
10/10/10	JANE SMITH	5	78	78%
10/10/10	BOB JONES	5	92	92%
10/10/10	ALICE BROWN	5	88	88%
10/10/10	CHARLIE WHITE	5	75	75%
10/10/10	DAVID GREEN	5	82	82%
10/10/10	EMMA BLACK	5	90	90%
10/10/10	FRANK GRAY	5	79	79%
10/10/10	GRACE HILL	5	87	87%
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ANNEXURE - VII

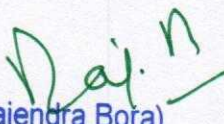
CL OF SONU RLY. STN. BLDG.
AT KM : 54/780.00 (FROM THM)
CH.: 0.00



NOTE:
1. PROPOSALS SHOWN IN RED COLOUR
2. SIGNALING SHOWN ON AFFECTED SIDE

(Rajendra Bora)
Genaral Manager (Mines)
Wonder Cement Limited
Jaisaamer Project

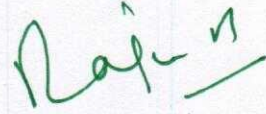
SIGNALING CONCEPT PLAN WITH PROPOSED SIDING TAKING OFF FROM SONU STATION			
SCALE	DWG. No.	DATE	REVISION
N.T.S	WCL/2022/SKT/01	14.04.2022	00



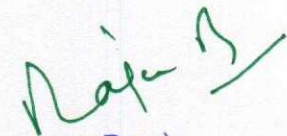
WONDER CEMENT LTD.**PROPOSED RAILWAY SIDING TAKING OFF FROM SONU STATION, JODHPUR
DIVISION, NORTH WESTERN RAILWAY****SUMMARY - CIVIL & PWAY WORKS**

S.No.	Item	Amount in Rs.
1	Earth work	25,90,00,000
2	Rails	17,26,40,000
3	Points & Crossings	3,18,50,000
4	Sleepers	9,03,56,800
5	Small P.way Fittings	2,57,85,460
6	Ballast Track Linking & Packing	8,24,85,000
7	Miscellaneous works	11,10,000
8	Minor Bridges - 11 no.	4,18,00,000
	Total Rs.	70,50,27,260

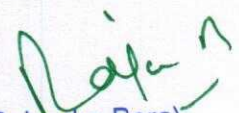
Say in Crores**70.503**


 (Rajendra Bora)
 General Manager (Mines)
 Wonder Cement Limited
 Jaisalmer Project

WONDER CEMENT LTD.					
PROPOSED RAILWAY SIDING TAKING OFF FROM SONU STATION, JODHPUR DIVISION, NORTH WESTERN RAILWAY					
BILL OF QUANTITIES FOR CIVIL & P.WAY WORKS					
SUPPLY & LAYING OF EARTH WORK					
S. No.	Description	Units	Quantity	Rate (in Rs)	Amount (in Rs)
1	Earthwork in filling in embankment, with the approved quality of-soil excavated from outside Client / railway land, to be entirely arranged by the contractor at his own cost, as per latest specifications i.e., RDSO guide lines for earthwork GE G-1 and GE G-14.	Cum	600000	200	120000000
2	Providing and laying blanketing materials over embankment/ cutting in layers of 25 cm loose and compacted by using vibratory roller /soil compactor of 10.0 tonne up to required degree of compaction to make the embankment of designed profile as per latest specifications ie., RDSO 's guidelines for earth work GE G-1 and G-14.and as advised by Engineer in charge.	Cum	150000	900	135000000
3	Turfing of slopes with sods, 10 cm thick and 20 cm square closely laid, including dressing and watering as required until properly rooted. The rate includes loading, transportation, all leads and lifts, ascents, descents, crossing of nallahs, railway track or any other obstructions, unloading etc. (Note:- 50% payment will be made on completion of the turfing and balance 50% will be made after proper rooting of the turf.)	Sq.m	50000	80	4000000
					259000000
SUPPLY OF RAILS					
2	Supply of 60kg IU Rails, 13m long, without bends/kinks, defect free..	MT	2656	65000	172640000
					Total
					172640000
SUPPLY OF POINTS AND CROSSINGS					
3	Supply of full set of (Right Hand Turnout) 60kg 1 in 8-1/2 points and crossings to RDSO Drg. No. T-4865, T-4966, T-4967 with curved switches & CMS crossing, lead rails with all fittings & fastenings as listed in the RDSO Drawings and 1m long Fish plates for fish plating CMS crossing, including point locking bolts with cotter & pin and spring point lever box to the RDSO Drg.No. T-3040 (MA) with handle & pull rod etc. as complete set but excluding PSC Turn out sleepers.	Set	22	1050000	23100000
4	Supply of full set of 60kg 1 in 12 points and crossings to RDSO Drg.No. T-4218, T-4219, T-4220 with curved switches & CMS crossing, lead rails with all fittings & fastenings as listed in the RDSO Drawings and 1m long Fish plates for fish plating CMS crossing as complete set but excluding PSC Turn out sleepers.	Set	7	1250000	8750000
					Total
					31850000
SUPPLY OF PSC SLEEPERS					
5	Supply of BG PSC Turnout sleepers 60 Kg, 1 in 8 1/2 Fan shaped layouts including Approach & Exit sleepers and long concrete sleepers (for fixing hand operated lever box/point machine) as per RDSO Drg. No. T-4865 and conforming to IRS specification T-45-1996 Corrigendum No 5 of Dec-2002 or latest corrigendum / amendment & Specifications etc. if any.	Set	22	500000	11000000
6	Supply of BG PSC Turnout sleepers 60 Kg, 1 in 12 Fan shaped layouts including Approach & Exit sleepers and long concrete sleepers (for fixing hand operated lever box/point machine) as per RDSO Drg. No. T-4218 and confirming to IRS specification T-45-1996 Corrigendum No 5 of Dec-2002 or latest corrigendum / amendment & Specifications etc. if any.	Set	7	700000	4900000
7	Supply of 60 Kg BG PSC sleepers for use at Stright track as per RDSO Drg. No. T-2496 conforming to IRS specification T-39-1985 corrigendum No. 04 of October 2011 or latest corrigendum / amendment & Specifications etc. if any.	Nos	33844	2200	74456800
					Total
					90356800
SUPPLY OF SMALL P.WAY FITTINGS					
8	Supply of Elastic Rail clips to RDSO Drg. No. T-3701 and conforming to specifications (IRS T-31-1992) & corrigendum No 2 of Apr 1999 or latest corrigendum / amendment & Specifications etc. if any.	Nos	134716	80	10777280
9	Supply of Elastic Rail clips 'J-type' to RDSO Drg. No. T-4158 and conforming to specification of "ERC J" provisional revised 1994 & corrigendum No 1 of Nov 2014 or latest corrigendum / amendment & Specifications etc. if any.	Nos	4644	80	371520
10	Supply of GFN liners to RDSO Drg. No. T-3706 & conforming to IRS specifications No. T-44-1995 corrigendum No.03 of Dec 2010 or latest corrigendum / amendment & Specifications etc. if any.	Set	67360	45	3031200
11	Supply of End cut GFN liners to RDSO Drg. No. T-3706 & End cut the liner as per T-4511 and conforming to IRS specifications No. T-44-1995 corrigendum No.03 of Dec 2010 or latest corrigendum / amendment & Specifications etc. if any.	Set	2324	45	104580
12	Supply of Grooved Rubber Sole Plate to RDSO Drg No. T-3711 and conforming to IRS specification T-47-2006 & Corrigendum No.1 of June 2007.	Each	68678	40	2747120
13	Supply of Fish plates 1m long to Drg No: T-5916 and conforming to IRS specification No. T-1-1966 Corrigendum no 9 of november 2009 or latest corrigendum / amendment & Specifications etc. if any.	Each	2322	3500	8127000
14	Supply of Fish bolts with nuts to RDSO Drg. No.T-1899 and conforming to specification No. IRS T-23-1967 & Corrigendum No. 5 of October 1987, with single coil spring washer to RDSO Drg No. T-10773.	Set	6964	90	626760
Total					25785460
SUPPLY OF BALLAST AND TRACK LINKING WORKS					


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 Jaisalmer Project

16	<p>Supplying, stacking, of machine crushed clean, hard, angular and durable Stone Track Ballast 50 mm size (65mm to 20mm size well graded) conforming to latest RDSO Track Ballast specifications (2004) & with latest corrections/amendments etc. and Handling/lifting/loading, leading, dumping/spreading Track ballast on the compacted formation. The rate includes supply, leveling the stacking area/ space, supply the ballast, labour, tools, all types of transportation, unloading, stacking, leads, lifts, handling, re-handling, ascends, descends, crossing of tracks and any other obstructions etc., sieve analysis as required with contractor's seive, charges for testing the quality of ballast at the reputed labs, all taxes, levies, duties, octroi, royalty, cess & seinorages etc. No deduction will be made on stack measurement for shrinkage as specified in technical specification.</p>	CUM	50000	1000	50000000
17	<p>Assembling, laying and linking including through packing & anti corrosive paint of BG track on straight/curve with 60 Kg SWR track 3 Rail Panel)/ Free rails/ glued insulated rails on 60KG PSC sleepers with a density of 1540 sleepers per km, over the initial rolled ballast bed of 200mm, with standard fittings, ensuring correct sleeper spacing, fixing & tightening of fish bolts & nuts, Lubrication of fish plated joints, greasing ERCs and MCI insert holes and oiling the threaded portion of bolts & nuts (using contractor's grease graphite & oil etc.), providing required expansion gaps as per the prevailing temperature, transition on curves where ever necessary, super elevation as required, realigning the same with initial packing after lifting/lowering as required ensuring 300mm ballast cushion, packing the full length of sleeper ensuring correct driving of ERCs such that the leg of the clip is flush with end face of MCI and maintaining proper gauge, alignment, level (both cross & longitudinal) as laid down in IRPWM and making the track fit for traffic for allowing trial engine run & first formation / rake run at the speed as advised by engineer in charge. The rate includes all leads, lifts, crossing of tracks, over coming any other obstructions, handling, re-handling, leading of rails, PSC sleepers, fittings to the site from nominated place/depot/stores, straightening of rails, cutting of rails to plumb/square, drilling & chamfering of holes in rails where required, providing extra joint sleeper at staggered joints in sharp curves, providing full ballast & boxing the track ensuring the ballast profile, paint marking of correct sleeper spacings on non gauge face side of rail heads and station numbers, versines & SE in curves at 10 m apart on the inside face of the web of outer rail, providing/fixing contractor's steel curve boards of standard size/drawing on either end of the curve, duly painted the curve details, applying grease to the rail head on gauge face side of outer rail in curve etc., as a complete job and as directed by Engineer in-charge. The unit of track Kilo meter consists of laying of both side rails on PSC sleepers with fittings.</p>	RM	23500	650	15275000
18	<p>Assembling, laying and linking including through packing of BG 60 kg, 1 in 8 ½ points and crossings on fan shaped layout PSC sleepers as per RDSO Drg. No. T-4865. The rate includes laying of PSC turnout sleepers including long sleepers at toe/tip of switch and entry & exit sleepers on the initial rolled ballast bed of 200mm with all type of standard fittings & fastenings as per RDSO drawings Railway specifications ensuring correct sleeper spacings including cutting and straightening , bending of rails, drilling holes as required & chamfering bolt holes, fish plated the joints, fixing distance blocks for check rails where required etc., including provision of self reversing spring point lever box of hand operated points duly oiled and greased, inserting glued insulated rail joints wherever required, squaring of sleepers, paint mark the sleeper spacings on non-gauge face side of rail heads, lubrication of fish plated joints, Greasing MCI inserts hole & leg of ERCs and oiling fish bolts/ other bolts and nuts (paint, Kerosene oil, black oil and grease graphite to be arranged by contractor at his own cost), provision of correct expansion gaps according to temperature prevailing at the time of linking, initial packing (under the Full length of sleepers) to bring the points and crossings to fairly good geometry and final tolerances as per P.Way manual & specifications duly lifting, packing, realigning, ensuring 300mm ballast cushion, ramming & dressing of ballast to the required ballast profile, providing correct throw making snug fit (housing) the Tongue rail & Stock rail at the tip of the switch when point is set, providing point locking bolts with cotter & pin etc. as per special conditions of contract and approved drawings, ensuring correct driving of ERC such that the leg of the clip is flush with the end face of the insert, initial packing to make the track fit for 15 Km/h. The rate also includes all labor and materials with all tools and plants, all leads, lifts, ascends, descends, crossing of tracks or over coming any other obstructions, handling, re handling crossing of lines, leading P.Way of materials & fittings to the site from clients nominated place/depot/stores, providing and fixing a standard point no. board duly painted the Point No. & details, oiling the surface of slide chairs, applying grease on gauge face side of the rail head of curved tongue rail &</p>	Nos	22	175000	3850000


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19	Assembling, laying and linking of BG 60 kg, 1 in 12 points and crossings on fan shaped layout PSC sleepers as per RDSO Drg. No. T-4218 with block duly dismantling the existing track. The rate includes dismantling the existing track taking inventory of the existing p-way material for handing over to the client at their nominated stores, laying of PSC turnout sleepers including long sleepers at toe/tip of switch and entry & exit sleepers, on the initial rolled ballast bed of 200mm with all type of standard fittings & fastenings as per RDSO drawings & Railway specifications ensuring correct sleeper spacings including cutting and straightening, bending of rails, drilling holes as required & chamfering bolt holes, fish plated the joints, fixing distance blocks for check rails where required etc., inserting glued insulated rail joints wherever required, squaring of sleepers, paint mark the sleeper spacings on non-gauge face side of rail heads, lubrication of fish plated joints, Greasing MCI inserts hole & leg of ERCs and oiling fish bolts/ other bolts and nuts (paint, Kerosene oil, black oil and grease graphite to be arranged by contractor at his own cost), provision of correct expansion gaps according to temperature prevailing at the time of linking, initial packing (under the Full length of sleepers) to bring the points and crossings to fairly good geometry and final tolerances as per P.Way manual & specifications duly lifting, packing, realigning, ensuring 300mm ballast cushion, ramming & dressing of ballast to the required ballast profile, providing correct throw making snug fit (housing) the Tongue rail & Stock rail at the tip of the switch when point is set, ensuring correct driving of ERC such that the leg of the clip is flush with the end face of the insert, initial packing to make the track fit for 30 Kmph. as per special conditions of contract and approved drawings. The rate also includes all labor and materials with all tools and plants, all leads, lifts, ascends, descends, crossing of tracks or over coming any other obstructions, handling, re handling crossing of lines, leading P.Way materials & fittings to the site from clients nominated place/depot/stores and leading the released materials as per inventory & hand over at clients nominated place/depot/stores, providing & fixing a standard point No. board duly painted the Point No. & details, oiling the surface of slide chairs, applying grease on gauge face side of	Nos	7	250000	1750000
20	Welding & finishing of rail joints connecting UIC 60 kg rails of 90 UTS by fusion welding by AT -process (SKV type), at the site on cess/on track (newly being linked vide above Item No.03 for making SWP as per RDSO Manual revised 2012 & RDSO specifications IRS T-19-2012 (incorporated A & C slip no 1 of April 2013) with latest/updated corrections/alterations/amendments with RDSO approved welding portions supplied by RDSO approved agency/vendor and with competent welder. The rate includes provision of required gaps for welding, cost of portions, equipment, crucibles/ moulds, materials, consumables like petrol, paints etc., tools, labor, chiseling, grinding, filing, rail profiling with rail profile guided grinding equipment, finishing the welds within the tolerances, USFD testing to be done as per RDSO " Manual for Ultra Sonic testing Of Rails and Welds" revised 2012, painting the weld collars with approved paint of anti-corrosive bituminous black as per specifications and as directed by Engineer in charge etc. The contractor shall guarantee the weld joints for the period of liability. Any joint fails during the aforesaid guarantee period contractor shall re-weld at free of cost. Defective/IMR classified welds in USFD testing shall be cut and re welded by contractor at free of cost. These re-welded joints also shall be tested ultra sonically any joints found defective/IMR shall be cut and re-welded again. If the contractor fails to re-weld it free of cost three times the cost of one weld paid to the contractor will be deducted from his dues.	Each	2322	5000	11610000
Total				Total	82485000
MISCELLANEOUS WORKS:					
21	Fabrication, erecting and fixing of dead end/Buffer stop as per approved drawing at the specified location as advised by Engineer in charge/consultant. The rate includes cutting of rails to required lengths, drilling of holes in rails and all other fittings, fastenings and materials shall be brought by the contractor at his own cost.	No.s	10	80000	800000
22	Dismantling Of Existing Dead End	No.s	1	40000	40000
23	Casting concrete fouling marks, Km posts, Gradient posts etc. cast as per standard drawing & as advised by Engineer-in-charge duly painted and lettered with the paint of approved quality and shade. The rate includes cost of all materials, labour for casting & fixing at the specified location and painting etc.	No.s	20	6000	120000
24	Installation of safety barricading along the main line and dismantling (after completion of work and on instruction of safety in charge) of high barricading with all complete in all respects as per direction of Engineer-in -Charge.. Minimum height of barricading shall be 1.5m from ground.	RM	300	500	150000
Total cost				Total	1110000
MINOR RCC BOX BRIDGES					
25	Construction of Minor RCC Box bridges & Retaining wall as per approved drawing by railway and as advised by Engineer-in-charge. The rate includes all material, labor, machinery, excavation, cement, sand, aggregates, reinforcement etc. and all materials as complete job.				
a	RCC Box size (1x2mx2m)	No.s	4	1200000	48,00,000
b	LHS (1x3mx3m)	No.s	2	3000000	60,00,000
c	LHS (1x4.0x4.0m)	No.s	1	4000000	40,00,000
	PSC Slab (1x6.10m)	No.s	2	5000000	1,00,00,000
	Composite girder (1x12.10m)	No.s	2	7500000	1,50,00,000
26	Supply & Erection of Rail in motion weigh bridge as per RDSO guidelines.	No.s	1	2000000	20,00,000
				Total	4,18,00,000
				GRAND TOTAL Rs.	705027260
				In lakhs	7050.2726

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Detailed Estimate For Proposed Signalling arrangements at SONU Station for siding works of WONDER CEMENTS Pvt Ltd. JODHPUR
DIVISION, NORTH WESTERN RAILWAY

No.	Description of Item	Unit	Rate	Qty	Amount
A	Electronic Interlocking, Design of circuits and drawings.				
1	Modifications in existing EI (Design, manufacture and supply of Hot Standby Architecture Electronic Interlocking (EI) system complete as per RDSO specification No. RDSO/SPN/192/2019 Ver. 2 or latest, as per technical requirement & tentative approved Signalling Plans & Diagrams. Electronic Interlocking (EI) system mainly consisting of Central Processing Equipment, Interface Equipment/Relays compatible for inputs/outputs of EI etc as per requirements & Dual operator Industrial Grade VDU Monitors (43" LED) with Redundancy. This also includes all the wiring materials, modules required.	per vital bit of station			
	For Station with routes less than 100		106500	40	4260000
2	Installation, wiring, programming, testing and commissioning of EI equipment supplied as per supply item including transportation from Consignee's depot to site.	Job	1242784.9	1	1242785
3	Supply of work station note book as per Technical Specifications . It also includes supply of Laser Printer (Only branded).	Per Strn.	86893	1	86893
4	After installation of EI System, Maintenance & Supervision for One year as per special conditions of contract.	Per EI installation	251322	1	251322
5	Supply of Instruments and Tool Kits required for Trouble Shooting and repair of hardware and software for EI system should be supplied for stations .	Set	125749	1	125749
6	Training of Technician/ Jr. Engineer for installation, Commissioning, Testing, Repairs & Troubleshooting of EI system.	Man/ Day	1106	25	27656
7	Design, preparation & supply of drawings in computer print copies and original tracing in AUTO CAD FORMAT for Electronic Interlocking at each station.	Per station	175967	1	175967
8	Training of Officers for installation, Commissioning, Testing, Repairs & Troubleshooting of EI system.	Man/ Day	1097	10	10971
9	Supply of embedded fanless PC based VDU control terminal	No.	159839	3	479518
10	Installation, wiring, testing and commissioning of embedded fanless PC based VDU control terminal	No.	102460	3	307379
11	Supply of offline domestic sine wave type inverter of 1000VA	No.	20857	2	41714
12	Installation, testing and commissioning of offline domestic sine wave type inverter of 1000VA	No.	5214	2	10429
13	Preparation of SWR literature in english alongwith all corrections as per approved SWRD & approved SIP.	Station	3599	2	7197
14	Translation of Station Working Rules from english to hindi and framing out in DIGLOT form (or similar software)as per extant Rly practice.	Station	4478	2	8956
15	Making photocopies & binding of the SWR literature in English/hindi/Diglot form as per Railway practice	Set	179	12	2142
16	Supply of maintainer's furniture of godrej make or superior	Set	22987	2	45974
17	Designing and Plotting of Signaling Interlocking Plan(SIP) in AUTOCAD.	Per SIP	28062	1	28062
18	Preparation and supply of laminated one set of all the completion plans including circuit diagrams and indoor as well as outdoor completion documents	Sheet	161	100	16100
19	Addition/alteration in existing relay room and SM Room, wiring. this includes all wires terminals etc.	Per Relay	524	100	52410
B	DATA Logger, RTU, FEP, CMU, FAS and Networking accessories				0
20	Supply of Modification material to existing data logger	No.	585985	1	585985
21	Execution of Modifications to existing Micro Processor based Data Logger System	No.	151496	1	151496
22	Supply of Failure Analysis & Fault Diagnostic software for data logger	Set	39122	1	39122
23	Installation and commissioning of Failure Analysis & Fault Diagnostic software for data logger	Set	9781	1	9781
24	Supply of Failure Analysis System (FAS)	No.	163959	1	163959
25	Installation, testing and commissioning of Failure Analysis System (FAS)	No.	40990	1	40990
26	Supply of 750 VA Off line UPS with battery backup 3 Hours for Failure Analysis System of reputed make	No	26250	1	26250
C	Indoor Relays, Timers, Flasher, KLCR				0
27	Q-Series Neutral Line Relay (QN1 Type), 12F/4B, 24V DC complete with plug board(base plate), connectors and retaining clips etc and conforming to BRS- 930 and RDSO Specn.No.IRS:S-34 & S-23 or latest.	No.	3944	15	59153
28	Q-Series Neutral Line Relay (QN1 Type), 8F/8B, 24V DC complete with plug board(base plate), connectors and retaining clips etc and conforming to BRS- 930 and RDSO Specn.No.IRS:S-34 & S-23 or latest.	No.	3789	10	37894
29	Relay 'Q' series neutral line, AC Immune, plug-in type, Style 'QBCA1'. DC Neutral line, 24V, 2HF/4B contacts, front and back contacts metal to carbon with plug board, retaining clip & connectors conforming to	Nos.	5345	12	64138
30	Q-Series Neutral Line Relay (Style QNA1K), 1000 Ohm, 6F/6B,24V DC complete with plugboard(base plate), connectors and retaining clips etc and conforming to BRS:930 & RDSO Specn.No.IRS:S-34 & S-23 or latest .	No.	4129	20	82576

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31	Q-Series LED ECR (Universal Type i.e.QECX-61), 4F/4B complete with plug board(base plate), connectors, retaining clips etc and conforming to BRS:941A STS/E/RELAYS/AC LIT LED SIGNAL/09-2002 ,Amdt.-1and RDSO Specn.No.IRS:S-34 & S-23 or latest.	No.	4984	28	139539
32	Sealing wire used for sealing of signaling relays & equipments.	Kg	175	10	1753
33	Q-Series Line Relay (QNN1 Type), AC immunized, 12F/4B, 24 V DC along with plug board (base plate), connectors, retaining clips etc and conforming to BRS-931A and RDSO Specn.No.IRS:S-34, S-23 and S-60 or latest.	No.	3806	15	57083
34	Q Series Twin newtral Line Relay(QNN1 type) 6F/2B 24V DC complete with plug board(Base Plate) connectors and retaining clips etc, and conforming to BRS Spec BRS 960 and RDSO Spec No IRS Spcn No.IRS-S-34&S-23 or latest.	No	4985	10	49853
35	Q Series Twin newtral Line Relay(QNN1 type) 4F/4B 24V DC complete with plug board(Base Plate) connectors and retaining clips etc, and conforming to BRS Spec BRS 960 and RDSO Spec No IRS Spcn No.IRS-S-34&S-23 or latest.	No	4985	10	49853
36	Q series Magnetically latched Newtral Line Relay (QL1) 11F/4B, 24VDC, Complete with Plug Board(Base Plate) connectors and retaining clipsand conforming to BRS Specn No. BRS 935A and RDSO Specn No.IRS-S-34& S-23, or latest.	No	5701	8	45612
37	Q series Magnetically latched Newtral Line Relay (QL1) 8F/6B, 24VDC, Complete with Plug Board(Base Plate) connectors and retaining clipsand conforming to BRS Specn No. BRS 935A and RDSO Specn No.IRS-S-34& S-23, or latest.	No	5427	4	21707
38	Q-Series Line Relay (QNA1 Type), AC immunized, 12F/4B, 24 V DC along with plug board (base plate), connectors, retaining clips etc and conforming to BRS-931A and RDSO Specn.No.IRS:S-34, S-23 and S-60 or latest.	No.	3806	15	57083
39	Q-Series Track Relay (QTA2 Type), AC immunized, 9 Ohms, 2F/1B along with plug board (base plate), connectors, retaining clips etc and conforming to BRS:939A & 966(Appendix F2) or latest.	No.	3735	10	37347
40	Q-Series Neutral Line Relay(QSPA1 Type), 24V DC,8F/4B along with plug board (base plate), connectors, retaining clips etc and conforming to BRS-933A and RDSO Specn.No.IRS:S-34, S-23 & S 60 or latest.	No.	5211	10	52113
41	Key Lock Checking Relay (KLCR) working on 24V DC, AC Immunized with different ward combinations and contact configuration 4F/4B with 2 extra ward plates and with case, RDSO spec no. RDSO/SPN/219/2016 ver 1.0 or latest, confirming to IRS S-23, S-34 & S-60, IRS S:46.	No.	9440	2	18880
42	Fixing of Realy bases in Relay rack, wiring the Relay bases as per approved interface circuits, testing and commisioning.This also includes bell test of wired circuits, insertion of Relays as per Approved circuits and testing for functional test under the supervision of Railway officials..	Relay	380	150	57000
D	Relay racks, CT racks, Tag Blocks, Terminal, Fuses, Indoor cables and Jumper wires				0
42	Supply of PVC insulated multi strand, single core copper conductor of size 16/0.2 mm (0.5sqmm) as per IS 694:2010 and RDSO Specn.No.IRS:S-76/89 (Amnd-3) or latest.	Km	5813	2	11627
43	Supply of 1 x 6 Sqmm (Red/Black/Green) multi strand copper power wire as per IS:694:2010 or latest, 84 conductor each dia 0.30 +/- 0.01 with insulation thickness of 0.8 mm and nominal conductor resistance of 3.3 ohms/km and test parameters as per RDSO Specn.No.IRS:S-76/89(Amnd.3) or latest.	meter	36	200	7274
44	Supply of 1 x 10 Sqmm (Red/Black/Green) multi strand copper power wire as per IS:694:2010 or latest,	meter	58	200	11506
45	Supply of 1 x 16 Sqmm (Red/Black/Green) multi strand copper power wire as per IS:694:2010 or latest,	meter	99	200	19890
46	Supply of 1 x 25 Sqmm (Red/Black) multi strand copper power wire as per IS:694:2010 or latest,	meter	155	200	31058
47	Supply of 1 x 35 Sqmm (Red/Black/Green) multi strand copper power wire as per IS:694:2010 or latest,	meter	177	200	35386
48	WIRING Materials				
i	Supply of wiring material in relay room for potential free relay contacts for digital & analog Inputs (1280 digital inputs and 32 analog inputs).	Per station	78132	1	78132
ii	Supply of Various types of Screw less Terminals with fixing arrangements	Per station	45015	1	45015
iii	Fixing of Screw less terminals on hylum sheets as per Railway practice for wire termination in CTR and in locations as required.	Per station	18500	1	18500
49	Supply of indoor PVC jumper wire (1x 0.6 mm) of all colours as per RDSO Specn.No.IRS:S-76/89 (Amnd.3) or latest..	Km	2413	0.5	1207
50	Supply of indoor PVC jumper wire (1x1 mm) of all colours as per RDSO Specn.No.IRS:S-76/89 (Amnd.3) or latest.	Km	5633	1	5633
51	Supply of Powder Coated Relay Racks as per Drg.No.CSTE/ NWR/SOR/01 with scaffolding and suitable grouting arrangements.	No.	46394	2	92788
52	Erection of Powder Coated Relay Racks as per Drg.No.CSTE/ NWR/SOR/01 with scaffolding and suitable grouting arrangements.	No.	15599	1	15599
53	Supply of Cable Termination(CT) racks as per Drg.No.CSTE/NWR/ SOR/02 complete along with fitting arrangements	No.	22732	1	22732
54	Installation of Cable Termination Racks Assembly complete including wall supports, scaffolding and suitable grouting arrangements .	No.	8687	1	8687

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55	Supply of ARA Terminal Block (M-6) made of PBT/Poly Carbonate as per RDSO Specn.No.IRS:S-75/2006 (Rev.2) or latest and RDSO Drg.No. SA-23741A(Alt. 4) or latest.	No.	87	600	52446
56	Supply of indicating type fuse inserts with holder (material will be supplied only from approved vendors of RDSO).				0
i	0.6 A	No.	61	50	3056
ii	1.6 A	No.	64	50	3221
57	Supply of indicating type fuse inserts without holder (material will be supplied only from approved vendors of RDSO).				0
i	0.6 A	No.	20	100	2023
ii	1.6 A	No.	18	100	1822
58	Supply of round head type non-detorating type low voltage cartridge fuse as per RDSO Specn.No.IRS:S-78/92 or latest and Capacity - 2/4/6/10A/16A/20A Amp	No.	55	500	27320
59	Supply of Tag block 200 way/160 way with PVC covers as per (IRS: S-77/2006 (Rev.1) or latest & Drg.no.SA-24751 & 52. Requirement of each type shall be specified by Engineer-in-charge.	No.	2222	1	2222
60	Supply of Tag block 96/100 /120 with PVC Cover - as per requirement as per (IRS :S-77/2006 (Rev.1) or latest	No.	1396	1	1396
61	Supply of PVC insulated Railway Signaling multi-core Indoor Cable 60core (0.6mm dia) conforming to IRS:76/89(Amd3) or latest.	Km	154444	0.5	77222
62	Termination of Outdoor Cables (Main Cables /tail cables) at both ends in location boxes, cable termination rack in relay room, station building, generator room etc.	Per Conductor	8	1500	12690
63	Supply of PVC insulated Railway Signaling multi-core Indoor Cable 40 core (0.6 mm dia) conforming to IRS:76/89(Amd3) or latest.	Km	99665	0.5	49832
64	Supply D type fuse block non indicating type low voltage non detorating fuse base suitable for fuse link of capacity 2A/6A/10A as per specification IRS:S-80/92 or latest	No.	30	30	888
65	Supply of D type fuse link non indicating type low voltage non detonating, capacity 2A/6A/10A as per specification IRS:S-80/92 or latest.	No.	31	10	307
66	Supply of Fuse auto changeover system for used in Railway Signaling System as per RDSO/SPN/209/2012 rev.1 with latest amendments.	Per Module	29278	6	175666
E	OUT DOOR SIGNALING CABLES				
67	Supply of Signalling Cable				
i	12 core * 1.5 sqmm	Km	18168	8	145344
ii	02 Core * 25 sqmm Power Cable	Km	110980	4	443920
iii	02 Core * 2.5 sqmm	Km	83503	4	334012
iv	24 core * 1.5 sqmm	Km	302527	38	11496026
v	06quad (0.9mm dia)	Km	295944	15	4439160
vii	PIJF 10 Pair Cable (.63 mm dia)	Km	143576	1	143576
68	Installation wiring testing and commissioning of Fuse change over system (FACS). This includes provision of common Buzzer & indication at ASM Room & ESM Duty Room and painting of fuse details.	Per Module	885	6	5313
F	Power Supply Equipments, Batteries, Surge protection, Program Switches, DG sets				0
69	Strengthening of Existing IPS with additional modules. This also includes installation testing and commissioning	No	250000	1	250000
70	Supply of DC to DC Converter, 110V DC/24V DC, 10 Amp as per RDSO Specn.No.S-96/2000 or latest.	No.	16161	4	64645
71	Supply of DC to DC Converter, 110V DC/24V DC, 5 Amp as per RDSO Specn.No.S-96/2000 or latest.	No.	15328	4	61311
72	Supply of DC to DC Converter, 110V DC/(12 -24)V DC, 5 Amp as per RDSO Specn.No.S-96/2000 or latest.	No.	14564	4	58255
73	Supply of Self Regulating Type Battery Charger,230V AC/110V DC, 50 Amps as per RDSO Specn.No.IRS:S-86/2000 (Amnd.4) or latest.	No	122346	1	122346
74	Supply of uncharged Low Maintenance Lead Acid (LMLA) secondary cell, shelf mounting type conforming to RDSO Specn.No.IRS:S-88/2004 or latest with inter cell connectors, nuts and bolts etc.				0
i	2V, 80 AH	No.	2068	30	62038
ii	2V, 300AH	No.	7060	60	423574
75	Charging of Lead Acid Batteries with contractors own battery grade sulphuric acid and distilled water with minimum two charge - discharge cycles,				0
i	2V 80AH	No.	371	30	11131
ii	2V 300AH/ 500 AH	No.	987	60	59204
76	Supply of Sine Wave Inverter, 110V DC/230V AC, 2 KVA as per RDSO Specn.No.IRS:S-82/92 (Amnd. 2) or latest. Inspection: RDSO	No	63532	2	127064
77	Supply of Single Phase Transformer, 230V AC/(110-130)V AC, 2 KVA as per RDSO Specn.No.IRS:S-72/88 (Amnd. 2) or latest. Inspection: RDSO	No	9739	1	9739
78	Supply of Rubber Mat for Power Equipment room. (5mm/10mm/12 mm/20 mm thick)	Kg.	107	100	10698
79	Suppl of Class 'C' Type lightening cum Surge protection safety device with visual indication and potential free contacts output suitable for 110V AC application as per RDSO/SPN/172/2001 or latest. It also include transparent enclosed box	No.	2293	10	22933

(Rajendra Bora)
General Manager (Mines)
Wonder Cement Limited
Jaisalmer Project

80	Supply of Class 'D' Type lightening cum Surge protection safety device with visual indication and potential free contacts output suitable for 110V DC application as per RDSO/SPN/172/2001 or latest. It also include transparent enclosed box.	No.	4838	10	48381
81	Supply of Class 'D' Type lightening cum Surge protection safety device with visual indication and potential free contacts output suitable for 24V DC application as per RDSO/SPN/172/2001 or latest. It also include transparent enclosed box.	No.	5414	10	54139
82	Installation and commissioning of various classes of lightening cum surge protection device as decided by site engineer. This include supply and fixing of any other material required to complete the installation & commissioning of lightening cum surge protection device.	No.	246	30	7375
83	Supply laying & fixing of Anti Static vinyl Flooring with black conductive layer sandwiched between two antistatic layer thickness of 2mm ± 01mm self fire extinguishing as approved by engineer incharge.	Sq.Feet	16	1500	23895
84	Supply of maintenance stand for relay room / battery room as per samples as per samples /drawings approved by the site engineer incharge.	No.	2391	2	4781
85	Supply of active lightening arrester of Class A for building protection as per standard NFC-17-102.material etc. Material required for installaion shall be arranged by the contractor.	No.	66992	1	66992
G	Points Machine & FITTINGS				0
86	Supply of ELECTRIC POINT MACHINE 143 MM STROKE AC IMMUNITY 400V AC COMPLETE WITH LOCK DETECTOR AND SLIDES FOR LOCK DETECTOR NON -TRILABLE TO OPERATE ON 110 V DC ROTARY LOCKING WITH CRANK HANDLE UNIVERSAL TPE AS PER RDSO SPECN. NO. IRS:S-24/2002 (AMND 1) RDSO DRG. NO S-10800 (ALT.5) WITH JUNCTION BOX TELESCOPIC. THE MOTOR WILL BE AS PER RDSO SPECN. NO. IRS: S-37/82 (AMND. 3) WITH RDSO DRG. NO. S-10910.	No.	72450	4	289800
87	Fixing, wiring, testing and commissioning of Electrical Point Machine on the extended sleepers at points as per std. practice and as per RDSO Drg No. SA 9151-52 or 9710 or 9161 or 10800 or 11000 as per section of rails used.	No.	27586	3	82758
88	Point insulation Complete set as per RDSO/SPN/168/2005	Set	1291	5	6453
89	Gauge Tie plate insulation as per RDSO/SPN/168/2005 as per RDSO drg No: T-10372Alt2, T- 10368, T- 10371Alt2, T-15083/88/Alt2 & T-11690/Alt2 and as per RDSO/SPN/168/2005 with latest amendments as applicable.	Set	1156	3	3469
90	Ground connections, complete set suitable for IRS type / approved point Machine for ordinary turnout with tongue attachment insulation and other insulation as per RDSO Drg. S/3361/62/63 (for IRS type point machine) or RDSO Drg No.SA-9151/52 (for Siemens point machine) with latest amendments. However the ground connection shall be procured only after confirmation from Railway engineer as per site condition /type of machine/turnout.	Set	7830	3	23489
91	Ground connections, complete set suitable for IRS type/approved point Machine for derail switch with tongue attachment insulation as per RDSO Drg. S/3361/62/63(for IRS type point machine) or RDSO Drg No. SA 9151/52 (for Siemens point machine) with latest amendments.	Set	5848	1	5848
92	Supply of William Stretcher Insulation Set (complete) as per RDSO/SPN/168/2005 with insulating bush and washer to suit point layout and conforming to RDSO Drg.No.T- 10372 or latest, T-10368 or latest and T-10371 or latest.	Set	386	10	3861
H	Track Circuit equipments, HASSDAC,etc.				0
93	Supply of Track feed Battery Charger as per RDSO Specn. No.IRS: S-89/2013 Ver.1.0 or latest. Charging Capacity Rating 10 Amps for Charging 80 AH Battery. Inspection: RDSO Inspection Charges: Borne by Railways Payment Terms: 100% after Supply.	No.	4505	10	45051
94	Supply of Adjustable Track Feed Resistance 30 Ohms (Disc Type) as per RDSO Drg. No.SA-20161-66/M or latest. Inspection: Consignee Inspection Charges: None Payment Terms: 100% after Supply.	No.	1439	10	14392
95	Fixing and wiring of DC track circuit equipments i.e. track feed charger, resistance, track relay, battery, B type choke etc.,	Per Track Cct.	6354	8	50832
96	Installation of DC track circuits covering all types of Track circuits including points zones also.	Per Track Circuit	7953	8	63623
97	Supply of Track Lead Junction Box(TLJB) as per Drg.No.RST-11509 or latest made from FRP material including brass bolts and hylam board sheet with terminals etc.	No.	1778	16	28454
98	Erection, Fitting and Rail connection of Track Lead Junction Box on two supports (FRP stumps) with contractor's fixing material .	No.	1316	16	21050
99	Supply of B Type Choke as per RDSO Specn.No.IRS:S-65/83 (Amnd. 1) or latest.	No.	4099	18	73781
100	Supply of Channel Pins MS (Galvanized) single groove, 7 mm suitable for 4mm dia bonding wire as per spec No IRS S 17 & RDSO Drg No. S-69/M. Inspection: Consignee	No.	6	1500	8535
101	Supply of GI wire 8 SWG (4mm dia) suitable for track circuit rail bonding. Inspection: Consignee	Kg	66	500	33005

(Rajendra Bora)
General Manager (Mines)
Wonder Cement Limited
Jaisalmer Project

102	Supply of Hydrometer, Exide make or similar for measuring specific gravity of Battery Graded acid with mounting stand in location Boxes.	No.	357	2	714
102A	Supply of HASSDAC with redundancy as per RDSO Spec No RDSO /SPN/ 177/2012 Ver3 including all fastenings and mounting devises.	Set	755000	1	755000
102B	Installation of HASSDAC as Railway practice for Block proving, testing and commissioning.	Set	45000	1	45000
102C	Tools for HASSDAC	Set	35000	1	35000
J	LED Main & Subsidiary signals, CLS units, Route Indicators & foundation etc.				0
103	Supply of LED signal lamps for Main colour light Signal, 110V AC retrofittable in existing CLS housing and compatible with AC LED ECR as per RDSO Specn.No.RDSO/SPN/ 199/2010(Rev.1) or latest.				0
i	RED	No.	8484	8	67874
ii	YELLOW	No.	8488	10	84881
iii	GREEN	No.	9552	2	19104
104	Supply of various LED signal light units (Subsidiary Signal), 110V AC retrofittable in CLS housing and compatible with AC LED ECR as per RDSO Specn.No.RDSO/SPN/153/2011 (Rev.4.1) or latest.				0
i	LED light unit for Route	No.	5861	18	105492
ii	LED light unit for Shunt Signal	No.	5821	12	69856
iii	LED light unit for Calling ON Signal	No.	7021	3	21063
105	Installation of LED signals lamps for auxiliary/subsidiary signals/main signals (i.e. Route, shunt, calling on, Red, Yellow, Green) as per instructions given by engineer incharge.	No.	179	18	3220
106	Supply of Position Light Shunt Signal Unit Complete with Post(made of GI Pipe of 80 mm Diameter Medium Class IS Spec. No. IS: 1239 Pt. 1/1990, Base, Hood, Cover etc as per Drg. No. SA-23840 suitable for LED Signal Lighting Unit	Set	4297	1	4297
107	Erection of Position Light Shunt signal with Base, Post, Signal unit and fixing of Number Plates.	No.	1780	1	1780
108	Supply of Position Light Shunt Signal Unit Complete, with offset bracket, hood, Cover etc as per Drg. No. SA-23840 suitable for LED Signal Lighting Unit.	No.	3359	4	13434
109	Erection of Position Light shunt signal on Offset bracket on main signal.	No.	1968	4	7871
110	Supply of Junction route indicator unit 1 way (Without Lenses & Holder) as per Drg. No. RDSO SA 23401 suitable for LED Signal Lighting Unit & as IRS:S-66/84 amndt-1 or latest.	No.	19836	1	19836
111	Supply of Junction route indicator unit 2 way (Without Lenses & Holder) as per Drg. No. RDSO SA 23402 suitable for LED Signal Lighting Unit & as IRS:S-66/84 amndt-1 or latest.	No.	20490	1	20490
112	Fixing of Junction type Route Indication 1-Way/2-Way/3-Way/4-Way/5-Way/6-Way on the top of the signal post	No	591	2	1181
113	Supply of Calling ON Signal Unit with Brackets & Fixing accessories. Calling On Signal Unit shall conform to RDSO Drg no 24351(Adv) Alt1 suitable to LED Signal Lighting Unit.	No.	2550	2	5101
114	Fixing of Calling-on Signal/A-Sign/AG-Sign unit on signal post. The item includes fixing of Co-On signal /A' sign/ 'AG' sign unit on signal post with bracket, hood etc.	NO	2325	2	4650
115	Supply of Stop Board as per RDSO Drg No 7235/B / Block Section Limit Board/Shunting Limit Board as per RDSO Drg. No. SA2375 (Adv.)	No.	2144	1	2144
116	Supply of Different warning Boards / Calling on Board used for Railway Signalling system as per RDSO Drg. No. SA2380 (Adv.)	No.	4638	2	9276
117	Fixing of Stop Board, Block section limit Board, Shunting Limit Board, goods warning board, Calling on Board with contractors own material.	No.	335	2	669
118	Supply, Fabrication and fixing of Signal Number Plates	No.	1223	15	18352
119	Supply and fixing of protective screen of expanded metal 12 SWG of size 1200 x 1500 mm on signals as per std. practice in RE Area.	No.	5088	1	5088
120	Casting of CC Foundation for Signal Post in the ratio of 1:3:6 as per Drg.No.CSTE/NWR/SOR/21/A using standard size of foundation/galvanized holding down bolts required for erection of colour light signal post.	No.	9362	7	65531
121	Casting of C.C. Foundation for Position Light Shunt Signal/ Indicator/SPI as per Drg.No.CSTE/NWR/SOR/ 22 in ratio 1:3:6 by using standard size of galvanized holding down/foundation bolts	No.	6310	1	6310
122	Cement concrete work for miscellaneous items in ratio 1:3:6. Item includes excavation, ramming of CC by using vibrator, curing and plastering with cement and sand mixture (aggregate will not exceed beyond 3.8 cm). The aggregate cement and sand will be supplied by contractor. Inspection: Consignee Inspection Charges: None. Payment Terms: 100% after installation.	Per CUM	4324	8	34591

Rajendra
(Rajendra Bora)
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Wonder Cement Limited
Jaisalmer Project

123	Supply & installation of LED base Colour Light Signal Unit complete as per RDSO Specification No. IRS: S-26/64 or latest. The item includes supply & erection of colour light signal post tubular 140 mm dia in required length complete with CI base, CLS unit, ladder with its base, ladder guards, maintenance platform and MS supporting bracket in the middle of the ladder, hoods & long hoods. The item also includes wiring inside the signal unit with 2.5 sqmm multi strand wire of different colour according to signal aspect with copper lug as per standard practice.				
i	2 - Aspect CLS Unit Mounted Directly on Signal Post	No.	21917	4	87668
iii	3 - Aspect CLS Unit Mounted Directly on Signal Post	No.	30180	2	60360
K	Panel room equipments, VDUs (Video Display Units), Fire alarm equipments, Furnitures				0
124	Supply and installation of housing cabinet of suitable dimensions to house VDU control terminal along with CPU, one set of input device (keyboard and mouse etc) ,Dual monitor (minimum 42") and power supply arrangement.	No.	107936	1	107936
125	Supply of Office Chair make Godrej CH-7B or similar of reputed brand. Inspection: Consignee	No.	2519	2	5037
126	Supply of Office Revolving Chair Godrej Make Model No.9u02r Bravo Or Similar of reputed brand.	No.	7681	1	7681
127	Supply of Office table with laminated top with three drawers on left hand side and one locker on the right hand side. Olive brown with duplicate keys. Make: Godrej Model T-9 (136.5 cmX68cmX 75cm) or Superior of reputed brand	No.	15038	1	15038
128	Supply of Steel Plain Almirah with 4 adjustable slaves Size: 1980mm height, 915 mm width and 485 mm depth. Make: Godrej Storewel Plain Large or Similar of reputed brand.	No.	16271	1	16271
129	Supply of Panel cum Block Instrument table complete as per approved drawing . It includes any modification to it if required by Engineer-in-charge at site.	No.	34561	1	34561
130	Supply of Microprocessor based Networkable Analogue Addressable up to 64 nodes 1 Loop Fire Alarm Control panel with LCD display, the panel should be equipped with sufficient nos. of loop as per RDSO Specification No. RDSO/SPN/217/2018 ver 2.0 or latest. Each loop shall have capacity of 127 analogue addressable devices in 1 loop, the panel shall have sufficient nos. of programmable relay control for controlling AHU's, pressurisation fans, ventilation fans at fire pump room, monitoring of fire sprinkler & sealed lead acid batteries sufficient for 24 Hours normal working & then capable of operating the system for 24 Hours during Emergency conditions as required.	No.	50166	1	50166
131	Installation ,Testing and Commissioning of Microprocessor based Networkable Analogue Addressable up to 64 nodes 1 Loop Fire Alarm Control panel with LCD display, the panel should be equipped with sufficient nos. of loop as per RDSO Specification No. RDSO/SPN/217/2018 ver 2.0 or latest. Inspection: Consignee Inspection Charges: None Payment Terms: 100% after Commissioning.	No.	12542	1	12542
132	Supply of Probe type bimetallic Heat Sensor/Fixed cum ROR 90 degree with required module to be communicated with main fire Alarm Panel as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest	No.	5367	4	21469
133	Installation ,Testing and Commissioning of Probe type bimetallic Heat Sensor/Fixed cum ROR 90 degree with required module to be communicated with main fire Alarm Panel as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest	No.	1342	4	5367
134	Supply of intelligent Analogue Addressable Multi-Sensor type smoke detector with inbuilt fault isolator and integral response indicator with 360 degree viewing angle.	No.	2737	15	41062
135	Installation, testing and commissioning of intelligent Analogue Addressable Multi-Sensor type smoke detector with inbuilt fault isolator and integral response indicator with 360 degree viewing angle as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest.	No.	684	12	8212
136	Supply of Analogue Addressable Manual Call Point with integral short circuit isolator, Analogue addressable protocol having status LED for alarming & standby mode,	No.	2865	3	8596
137	Installation ,Testing and Commissioning of Analogue Addressable Manual Call Point with integral short circuit isolator, Analogue addressable protocol having status LED for alarming & standby mode, Electronically addressed) as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest	No.	716	3	2149
138	Supply of UV/IR Type Flame detector with required module to communicate on main fire alarm panel as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest. Inspection: RDSO	No.	53605	2	107211
139	Installation ,Testing and Commissioning of UV/IR Type Flame detector with required module to communicate on main fire alarm panel as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest	No.	13401	2	26803
140	Supply of Linear Heat Sensing (LHS) cable as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest Inspection: RDSO Inspection Charges: Borne by Railways Payment Terms: 100% after Supply.		599	100	59926

(Rajendra Bora)
General Manager (Mines)
Wonder Cement Limited
Jaisalmer Project

141	Installation of Linear Heat sensing (LHS) cable as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest	meter	150	100	14982
142	Supply of LHS interface module as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest. Inspection: RDSO	No.	25190	4	100759
143	Installation of LHS interface module as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest.	No.	6297	4	25190
144	Supply of Air Sampling Type detector shall use LASER type. This type of detector shall use piping or tubing distribution network that shall run from the detector to the area as to be protected.s Payment Terms: 100% after Supply.	set	115236	2	230472
145	Installation ,Testing and Commissioning of Air Sampling Type detector (it shall use LASER type) as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest. Inspection: Consignee	set	28809	2	57618
146	Supply of intelligent Addressable Loop Powered Sounder cum beacon with base inbuilt fault isolator with protection category of IP42 and duly approved as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest	No.	6436	2	12872
147	Installation, testing and commissioning of intelligent Addressable Loop Powered Sounder cum beacon with base inbuilt fault isolator with protection category of IP42 and duly approved as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest Inspection: Consignee Inspection	No.	1609	2	3218
148	Supply of FRLS unarmoured/armoured cable(2Cx1.5 sq.mm) with all accessories for connection of all Fire Alarm devices as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest	Lot	27324	1	27324
149	Installation ,Testing and Commissioning of FRLS unarmoured/armoured cable(2Cx1.5 sq.mm) with all accessories for connection of all Fire Alarm devices as per RDSO Specification No. RDSO/ SPN/ 217/ 2018 ver 2.0 or latest	Lot	6831	1	6831
150	Supply of CO2 type fire extinguisher capacity 4.5 Kg capacity ISI Mark IS: 15683 operating temperature (-30) ° to (50) ° for class 13 B type of fire with 1 mtr. Hose pipe fitted with PVC bend horn complete in all respect	No.	5302	5	26509
L	Apparatus case, Outdoor installation, Fuses, ARA Terminal, Hylam Sheet, Phenolic Laminated sheets				0
151	Supply of Apparatus Case Single(Large) NE Rly Type as per Drg. No. CSTE/6088 fitted with two nos of E Type lock (ward No will be specified by Engineer-in Charge) as per RDSO Drg. No. SA 3376 and Key to Drg. No. 3377 as per RDSO drawing No. RDSO/S-11500	No.	14946	14	209237
152	Installation of Apparatus Cases Single (Large) with 'E' type lock on CC foundation. This includes filling of location foundations with river bed sand and plastering on top of the sand. Supply of 'E' Type lock has been covered in supply of Apparatus case separately. It covers fixing of lamp holder , switch and lamp etc. in Apparatus Case	No.	1039	14	14547
153	Supply of Apparatus Case half (Medium) NE Rly Type as per Drg. No. CSTE/6088 fitted with two nos of E Type lock (ward No will be specified by Engineer-in Charge) as per RDSO Drg. No. SA 3376 and Key to Drg. No. 3377 as per RDSO drawing No. RDSO/S-11507.	No.	9439	8	75515
154	Installation of Apparatus Cases Half (Medium) with 'E' type lock on CC foundation. This includes filling of location foundations with river bed sand and plastering on top of the sand. Supply of 'E' Type lock has been covered in supply of Apparatus case separately.	No.	633	8	5062
155	Excavation and Casting of Apparatus Case foundation in ratio 1:3:6 with contractor's own materials including cement and galvanized anchor bolts of standard size. The required scaffolding Ferma etc for Casting of foundation will have to be brought by the contractor at his own cost.The item also includes additional masonry work as well as earthwork if required on bank where there will be possibilities of foundation sinked, fallen or tilted. Inspection: Consignee Inspection Charges: None Payment Terms: 100% after installation.				0
i	Single (Large) Case Apparatus case / SS location box as per Drg No. CSTE/5074	No.	6889	14	96445
iii	Half (Medium) Case Apparatus case / SS location box as per Drg No CSTE/5074	No.	5259	8	42073
156	Supply of Phenolic laminated Sheet, grade P3 in standard size of 1220 X 1220 x 12 mm as per spec. No IS 2036 of 1995 or latest. Test report of manufacture to be supplied.	No.	4855	10	48551
157	Fabrication and fixing of phenolic laminated sheet of size 10/12/20 mm thick in location box by providing all fixtures as per Railway Drawing including fixing of PVC coated string rods at the back side for cable support with contractor's own materials.				0
i	Single Case (Large Case)	No.	2344	14	32823
ii	Half Case (Medium Case)	No.	684	8	5472
158	Fixing of ARA(M-6) Terminals /Screw less connectors / modular disconnect terminal blocks and fuse blocks on phenolic laminated sheets and fixing by stainless steel/brass nuts & bolts.	No.	13	1000	12520
159	Supply of two pin Lamp holder Bakelite type for Apparatus Cases (ISI mark of reputed make)	No.	44	10	444

(Rajendra Bora)
General Manager (Mines)
Wonder Cement Limited
Jaisalmer Project

160	Fixing of KLCR relays in field in half location boxes if Gate lodge is not provided or at any other location as decided by engineer in charge.	No.	2193	2	4386
M	Cable laying material, Cable protection, Cable execution, Jointing Kits items etc.				0
161	Supply of Medium class GI pipes 100 mm dia(4.5 mm thickness) as per IS 1239 (Part 1) : 2004 with coupling on culverts bridges as per Drg.No.CSTE/NWR/SOR/06 to 12 or at any other locations as decided by Site Engineer.	Mtr.	761	160	121706
162	Fixing of Medium class GI pipes 100 mm dia(4.5 mm thickness) as per IS 1239 (Part 1) : 2004 with coupling on culverts bridges as per Drg.No.CSTE/NWR/SOR/06 to 12 or at any other locations as decided by Site Engineer	Mtr.	190	160	30427
163	Supply of Medium class GI pipes 50 mm dia(3.6 mm thickness) as per IS 1239 (Part 1) : 2004 for use in ASM room and at any other location as decided by Site Engineer.	Mtr.	391	40	15621
164	Fixing of Medium class GI pipes 50 mm dia(3.6 mm thickness) as per IS 1239 (Part 1) : 2004 for use in ASM room and at any other location as decided by Site Engineer.	Mtr.	98	40	3905
165	Supplying and placing of one layer of standard size of 'B' grade quality bricks of the local make spreading on cables laid.(minimum size of brick 200mm X 100mm X 70mm) Inspection: Consignee Inspection Charges: None. Payment Terms: 100% after Installation.				0
i	Lengthwise (up to 2 cables).	RM	15	1500	22200
ii	widthwise (more than 2 cables)	RM	32	1800	57366
166	Supply of Double Walled Corrugated (DWC) HDPE Pipe/duct with associated collars etc. as per RDSO Specification No. RDSO/SPN/204/2011 or latest anti-rodent & anti- oxidant and non flame propagating type in 6 meters straight length and of size 120 mm outer dia,& 103.5 mm inner dia.	No	1798	200	359640
167	Supply of Double Walled Corrugated (DWC) HDPE Pipe/duct with associated collars etc. as per RDSO Specification No. RDSO/SPN/204/2011 or latest anti-rodent & anti- oxidant and non flame propagating type in 6 meters straight length and of size 50 mm outer dia, & 38 mm inner dia.	No	361	600	216468
168	Supply of Double Wall Corrugated (DWC)-HDPE pipe/duct of size 200 mm outer dia, & 175 mm inner dia.	Mtr.	383	1000	383470
169	Supply of Thermo shrink Universal Jointing kit for Quad Cable (for straight joints) as per RDSO spec IRS/TC-77/2012 revision 3 With latest Amd.	NO	2149	20	42975
170	Jointing of 4 / 6 quad /Signaling cable with Heat Shrinkable straight through Jointing Kit. All the material required for the work are to be arranged by contractor himself at his own cost except Thermo shrinkable Joint Kit/Rapid Joint kit.	NO	1157	10	11575
171	Horizontal direction drilling/boring without damage of surface road /track using Auger Machine(HDD machine). The bore shall be upto 200 mm dia & shall be done at the depth of minimum 1200 mm from the ground level. The ground level shall be considered ignoring the bank height of the bank of the road. The length of the bore shall be minimum 4 Mtrs long.	Mtrs.	1203	100	120297
172	Horizontal Drilling by using manual pushing method at minimum depth of 1.5 meter below the formation level of earth as per decision of Engineer in charge .	per meter	123	100	12274
173	Loading ,unloading and transportation of cable drums of OFC/HDPE coil/ other signalling Cables/Telecom cables from depot to the site of work.	Drum x track KM	3	1000	3160
174	Supply of RCC cable route marker engraved and painted on both side along the route at every 50 meter and route diversion as per Drg. No 4014/00/CC4 or latest/ Stone marker.	No.	329	100	32868
175	Transportation at site and Installation of RCC cable route marker engraved and painted on both side along the route at every 50 meter and route diversion as per Drg. No 4014/00/CC4 or latest/ Stone marker.	No.	82	200	16434
176	Shifting of Exposed cables. The item includes Removal of exposed cable from existing trench & laying the same in new trenches. Digging, Placing of capping/Half round RCC pipe covered separately	KM	6860	1	6860
177	Excavation of cable trench as per cable route plan, 1.2 Mtr. deep and of 0.3 Mtr. to 0.6 Mtr. wide at bottom as per RDSO sketch No. SDO/CABLE LAYING/003 or latest alongside the track in normal (all type) soil/strata, conforming to distances as per cable route plan and refilling.	Cu. Mtr	274	3000	822840
178	Digging of trench 1.2 Mtrs. deep from rail flange/ road level and 0.3 Mtrs to 0.6 Mtrs wide and back filling after placing of DWC/ RCC/GI pipe. (Placing of DWC/RCC/GI pipe covered separately).The ballast disturbed be screened and dressed as required by Engineer-in-charge or his representatives and road tarred immediately. For track crossing, Drg. No.CSTE/3644 Pg.7 of 11 and for Road Crossing, Drg. No. CSTE/3644 Pg. 5 of 11 are to be followed.	Cu. Mtr	274	12000	3291360
179	Digging of cable trench 0.3 Mtrs. Deep and 0.3 Mtrs. Wide on Asphalted Platform / Road / Hard rocky area. Refilling with earth leveling of trenches & restoring the original surface of trenches.	Cu. Mtrs.	503	100	50304
180	Digging of cable pit (min 2x2x1m) as per instruction of Site Engineer, supplying and filling of sand before and after coiling the cables, covering top of the cable pit with stones and providing brick masonry on all four sides of the cable pit and plastering thereafter.	No	12507	3	37520

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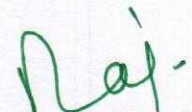
181	Laying of S&T Cables of various cores/ pairs/ quads in trenches/ GI pipes/ RCC pipes/ DWC pipes/ Trunking. This also includes laying of cables in track crossings & road crossings.	RM	9	70000	637000
182	Cement concrete work for miscellaneous items in the ratio 1 : 3 : 6 . Item includes excavation, ramming, curing and plastering with cement & sand mixture (aggregate not exceeding 3.8 cm.) (Aggregate cement & sand to be supplied by the contractor).	Per Cu. Mtr.	3628	2	7257
183	Providing brick masonry in ratio 1:6 cement and mortar including plastering with 1:4 cement and sand mixture both sides, 20 mm thick each with contractor's owned class II bricks, including excavation, curing, grouting, bolting etc. wherever required. Bricks sand and cement to be supplied by the contractor	Per Cu. Mtr	1991	2	3981
N	Earthing, Measuring Instruments, Multimeter, Earth Tester, Clamp meters, Fault Locators, ELD(Earth Leakage Detector) etc.				0
184	Supply of Earth Leakage Detector (ELD) 12 Channels as per RDSO Specn.RDSO/SPN/256/2002 or latest.	No.	158443	1	158443
185	Wiring, installation, testing and commissioning of Earth Leakage Detector (ELD) 12 Channels as per RDSO Specn.RDSO/SPN/256/2002 or latest.	No.	39611	1	39611
186	Supply of basic material to construct unit maintenance free earth as per RDSO Specs. No RDSO/SPN/197/2008 or latest	Lot	17531	20	350615
187	Installation of Unit Maintenance Free Earth	Set	7862	5	39308
188	Supply of earth electrode as per standard practice and as per Drg No.CSTE/NWR/SOR/14A & 14B. It includes supply of GI pipe of 3m length.	No.	2233	25	55820
189	Installation of earth electrode as per standard practice and connecting it to the equipments which are required to be earthed	No.	558	25	13955
190	Provision of Ring Earth for EI system which includes	station	151993	1	151993
191	Installation, testing and commissioning of Ring Earth for EI system	station	37998	1	37998
192	Supply of Digital Multimeter of Fluke 287 Industrial	No.	44046	1	44046
193	Supply of Professional AC/DC clamp meter 3 ¼ digit , true RMS measurement,	No.	13946	1	13946
194	Supply of Handheld Digital Earth Clamp Tester	No.	84854	1	84854
195	Supply of electronic Cable route tracer/locator with underground cable and pipe locating receiver and cable avoidance tool that provide location of armoured OFC , signalling and telecom , power cable etc.	No.	416266	1	416266
196	Supply of Digital Cable Insulation Tester for measurement of cable insulation resistance with auto range 0-500 V DC. Motwani or from any reputed make.	No.	8689	2	17379
197	Supply of Transmission Measuring Set/Kit along with all accessories as per RDSO Specn.No.IRS: TC- 43/87 or latest.	No.	18663	2	37327
198	Supply of Cable Fault Locator to localize the faults of underground cables. Aplaab make (Model No.3049) OR C Scope Stanley make(Model TS-90) or superior from any reputed make	No.	57230	1	57230
199	Supply of Digital Earth Resistance Tester for measurement of earth resistance with 3.5 digital LCD, 12.5 mm screen segment and Range -0.5 Ohms to 500 Ohms. WACO or from any repudiated make	No.	8758	2	17517
P	Miscellaneous Signalling items, Painting, lettering				0
200	Supply of seal plier as per sample got approved from site engineer incharge. Inspection:Consignee Inspection Charges: None Payment Terms: 100% after Supply	No.	1053	2	2106
201	Supply of Vacuum Cleaner, Eureka Forbes or from any reputed make only	No.	22345	1	22345
202	Supply of Safety lock Godrej or Navtal make size as approved by site engineer	No.	112	20	2239
203	Supply of hand cuff lock Godrej or Navtal make size as approved by site engineer.	No.	344	50	17217
204	Supply of Obstruction test piece 3mm/5mm as per sample approved by Engineer	No.	2460	2	4921
205	Dismantling of Concrete foundation/ Demolishing RCC/CC/Stone work /Cutting Trac, carpenting/ CC Flooring/ Precast concrete slab/ Brick work including leading the debris inside Railway limit or outside Railway limit as directed by site in charge.	Cu. Mtrs.	585	5	2925
206	Transportation of S&T material leading up to 1 Km including Loading from Starting point, unloading & Stacking at destination.	MT	628	10	6282
207	Extra for each additional 1 Km or part thereof.	MT-KM	6	5000	28450
208	Provision of Power supply arrangement, with contractors own Generating sets ,	Per DG Set / day	1750	25	43760
209	Complete painting and varnishing work at a station (5/6 or more Line). Complete out door equipment as per Railway standards	Station	50627	1	50627
210	Hiring of JCB machine(in good condition) for levelling and dressing ground/ dismantling structures including disposal of debris through dumpers etc with contractors labour , JCB machine , machine operator, fuel etc.	hrs.	1091	20	21812
211	Supply & fixing of Crank Handle Box & SM's key box of size 450 mm x 250 mm x150 mm and made of 12 mm thick teakwood with a glass front, lock and sealing arrangement	No.	1831	2	3662
212	Supply & fixing of KLCR boxes & fixing of KLCR Relays in ASM office. I	No.	1722	2	3445

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Q	Telecom items(Conference system, IPIS, OFC equipments, Control equipments,				
					0
213	Supply of managed SDH (STM-1 Add/Drop MUX and upgradeable to STM-4) fully wired for 2 X 63 MB and equipped for 21E1s and a Virtual Container (VC)-12 with STM-1(L1.1) aggregate interface including power supply, order wire, Ethernet card, sub rack, inbuilt DDF, installation material and all other accessories, manuals etc. as per TEC. Specification GR SDH 04/02, March 02 or with latest amendment.	No.	193958	2	387916
214	Installation, wiring, testing & commissioning of managed SDH (STM-1 Add/Drop MUX and upgradeable to STM-4) fully wired for 2 X 63 MB and equipped for 21E1s and a Virtual Container (VC)-12 with STM-1(L1.1) aggregate interface including power supply, order wire, Ethernet card, sub rack, inbuilt DDF, installation material and all other accessories, manuals etc. as per TEC. Specification GR SDH 04/02, March 02 or with latest amendment.	No.	48490	1	48490
215	Supply of 2 Mb Programmable Primary Digital drop insert multiplexer as per RDSO Specs. IRS TC- 68/2004 (Amnd.1) or latest with conference facility and other stipulation to tender documents and fully wired for 30 channel complete with power supply card, remote control, supervision facility and all other accessories, installation material, manuals etc	No.	253550	2	507100
216	Installation, wiring, testing and commissioning of 2 Mb Programmable Primary Digital drop insert multiplexer as per RDSO Specs. IRS TC- 68/2004 (Amnd.1) or latest with conference facility and other stipulation to tender documents and fully wired for 30 channel complete with power supply card, remote control, supervision facility and all other accessories, installation material, manuals etc. It should have facilities to accommodate data interface card in multi drop mode and should be able to support cards needed for video conferencing and ISDN. It shall support NMS installed at Test Room and may operate local/remote location of entire section.	No.	63388	1	63388
217	Supply of SMPS based Battery Chargers as per RDSO Spec for Telecom use 48 volts, 25 Amps in 2+1 configuration modules of 25 Amps with ultimate expandable capacity 50 Amps, automatic switching between the modules as per RDSO Spec No. RDSO/SPN/TC/23/1999 version 4 or latest along with two potential free contacts.	No.	127514	2	255028
218	Installation of Battery chargers, Power distribution Board along with MCBs of suitable ratings and wiring and commissioning of External alarm contacts through EMS.	No.	3667	1	3667
219	Supply of 48Volt/200AH maintenance free VRLA Batteries duly charged as per IRS Spec. No. S-93/96(A) with amendments-1 or latest Inspection: RDSO Inspection Charges: Borne by Railways. Payment Terms: 100% after Supply.	No.	77028	2	154056
220	Installation, wiring, testing & commissioning of 48Volt/200AH maintenance free VRLA Batteries duly charged as per IRS Spec. No. S-93/96(A) with amendments-1 or latest. Inspection: Consignee Inspection Charges: None. Payment Terms: 100% after Execution.	No.	19257	1	19257
221	Supply of integrated Access Multiplexer 4U height/19" Rack mountable with 4 DTE (1+1) protection E1 interfaces & V.21/V.23 Modules supporting 8 Interface of (2W/4W) in one module and one Telnet port balance 2 slots empty; unit to support both AC/DC power supply; Cable to be provided for one no for E&M interface; DC to AC adapter- 1 Nos; Make Fabio 4C/ 4E1/ DC Team Engineer	Nos	53345	4	213381
222	Installation of integrated Access Multiplexer 4U height/19" Rack mountable with 4 DTE (1+1) protection E1 interfaces & V.21/V.23 Modules supporting 8 Interface of (2W/4W) in one module and one Telnet port balance 2 slots empty; unit to support both AC/DC power supply; Cable to be provided for one no for E&M interface; DC to AC adapter- 1 Nos; Make Fabio 4C/ 4E1/ DC Team Engineer. Inspection: Consignee Inspection Charges: None. Payment Terms: 100% after execution.	LS	9048	4	36193
223	Supply of E1 Optical Fibre TDM over Ethernet optical Multiplexer with 4 fibre ports supporting single mode Fibre on alternative path (Main & Hot standby); 100 Mbps ethernet port & 4 ITI G.203 Interfaces and supporting dual power supply from socket unit to be interoperable with Integrated Access Multiplexer similar to E1 optical Fabio Team engineer	No	17895	4	71580
224	Installation of E1 Optical Fibre TDM over Ethernet optical Multiplexer with 4 fibre ports supporting single mode Fibre on alternative path (Main & Hot standby); 100 Mbps ethernet port & 4 ITI G.203 Interfaces and supporting dual power supply from socket unit to be interoperable with Integrated Access	No	4474	4	17895
225	Supply of Push Button Type Magneto phone	No.	6500	2	13000
226	Installation wiring and testing of Mageneto Phones.	No.	2500	1	2500
227	Supply and provision of thermo-shrink splice filling jelly jointing kit as per RDSO Specn.No.RDSO/SPN/TC/57 2015 (Rev.1) Amnd.1 or latest suitable for PIJF cable for straight through joints.	No.	1549	20	30978


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228	Supply of VF Transformers (2T/3T), 1120/470 Ohms as per RDSO Speen.No. IRS: TC-7612000 with Amnd I or latest for emergency joints in 6-Quad Cable.	No.	923	20	18463
229	Supply, fixing and wiring of surge protection device in attachment plug module with replaceable surge protection for coaxial signal, interfaces N-connector plug/socket installed as surge protection between antenna and 25 W VHF sets, make- Phoenix Contact model CN-UB-280DC-SB-2818148 or similar as per specifications.	No.	6981	5	34904
230	Supply of 25Watt VHF set (Trans - Receive VHF set) complete with accessories and power supply, antenna etc.	Set	22408	2	44816
231	FOIS arrangement near motion weigh bridge in plant area.	Unit	850800	1	850800
232	Supply of OFC integrated access device 1U height of 15 U height/19" rack mountable for LVCD/Digital axle counter purpose, optical module integrated in the unit supporting dual core OFC and one 100 Mbps ethernet port for surveillance/smoke detector, optical distance support to be 20 Kms, unit to support one E&M card supporting for 2W/4W (each port configurable) to support axle counter/UFSBI/control phone/EC/RTU and one telnet/SNMP port unit to support DC/AC power supply, unit to support change over mechanism between quad and optical fiber for E&M interface option, one number cable to be provided along with E&M; FABIO/2CX/OFC/ DC and module 2W/4W four port : Make : TEAM ENGG/FABIO/WAVES or similar/TANSY.	No.	191577	2	383155
233	Hiring of vehicle for Railway personnels for yard remodelling of SONU station in c/w a New cement siding (Wonder Cement Ltd.)	Per Month	40000	6	240000
234	Supply of essential spares of item No 1 above to the extent of 25% subject to minimum of one, for all types of cards/modules, card cage, operating/maintenance PC, connectors /couplers, fuses, relays, timers etc. used in the EI system.	Lot	1250000	1	1250000
235	Temporary arrangements during line block / NI	Lumpsum	75000	1	75000
236	Miscellaneous arrangements for Non Interlocked (NI) period / at the time of Commissioning. For the provision of temporary telephone sets, shelter, lighting, amplifier communication system, position lights & emergency lights arrangements for train movements during NI & Pre-NI Period with commissioning of the station. NOTE: Jerry can,, Electric Drilling machine, Navatal locks Godrej, key chains with ring, chair, double key lock, Tool kit for ESM, Manufacture, supply and fixing of S, fixing of Telephone/Plunger box, Transportation of materials (for above 50 Kms. only), Transportation of light material/men with tools/documents from central location to site of work, Temporary accommodation during line block, Supply and Fixing PVC pipe (25mm) with bends (30m+10bends)	Lumpsum	250000	1	250000
237	Supply of additional cabinet Cabinet of DC-DC panel and AC Distribution panel for Sonu station to accommodate the additional converter and Inverter for existing Inetgrated Power Supply (IPS) system installed at Sonu station.	Lumpsum	100000	1	100000
Total of Estimate					45379671
Departmental Charges @ 6.25%					2836229
Contingency Charges @ 1%					453797
Grand Total of S&T Estimate					48669697
					IN LAKHS
					486.70


 (Rajendra Bora)
 General Manager (Mines)
 Wonder Cement Limited
 Jaisalmer Project

WONDER CEMENT LTD.**PROPOSED RAILWAY SIDING TAKING OFF FROM SONU STATION,
JODHPUR DIVISION,NORTH WESTERN RAILWAY**

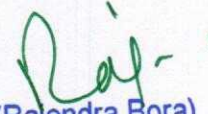
SUMMARY - OHE WORKS		
S.No.	Item	Amount in LAKHS
1	OHE RAILWAY PORTION	47.94
2	OHE LEAD LINE	608.92
3	OHE INPLANT YARD	691.92
4	SSP	95.32
5	TOTAL (IN LAKHS)	1444.104431


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 Genaral Manager (Mines)
 Wonder Cement Limited
 Jaisalmer Project


M/s. WONDER CEMENT LTD								
PROPOSED SIDING OF WCL TAKING OFF FROM SONU RAILWAY STATION								
ABSTRACT COST ESTIMATE FOR PROVISION OF 25 KV A.C SINGLE PHASE 50 HZ CONVENTIONAL REGULATED OHE IN RAILWAY PORTION								
Sl. No.	Item Description	Unit	App. Qty	Rate		Total for		Amount (in Rs.)
				Material	Erection	Material	Erection	
1	Preparation of Designs and Drawings							
1	Preparation of designs and drawings for over head equipment viz.- sectioning cum wiring diagram,power supply diagram, Traction working rule diagram and instructions etc .required for commissioning of OHE including approval from Consultant,Client & Railway.	TKM	0.6	0	27,500	0	16500	16500
2	Supply & Erection of Concrete (M 15) for foundation and plinth in hard and Rock soil	Cum	0		8,200	0	0	0
3	Supply & Erection of Concrete (M 15) for foundation and plinth in other than hard and rock soil.	Cum	60		7,500	0	450000	450000
4	Supply and erection of all types of galvanized steel structures, small parts steel etc	MT	8	1,21,051	7,788	968408	62304	1030712
5	Supply and erection of guy rod assembly.	Each	6	13,500	1,358	81000	8148	89148
6	Supply and erection of a single bracket assembly for Conventional OHE with long Creepage path Stay and bracket Composite Insulators.	Each	22	25,000	1,938	5,50,000	42,636	5,92,636
7	Supply and erection of overhead equipment Conventional by manual with 107 sqmm contact wire and 65sqmm cad copper catenary wire with droppers & clips ,jumpers and Large span wire etc.	TKM	0.6	0	195000	0	1,17,000	1,17,000
a	Supply of 107 sqmm Contact wire	KM	0.75	950000	0	7,12,500	0	7,12,500
b	Supply of 65sqmm cad copper catenary wire	KM	0.75	600000	0	4,50,000	0	4,50,000
c	LS wire	KM	0.06	1150000	0	69,000	0	69,000
8	Supply and erection of a regulating equipment (3 pulley type) with counter weight assembly for Conventional OHE.	Each	2	75,000	6,981	1,50,000	13,962	1,63,962
9	Supply & Erection Double conductor OHE Termination assembly with Insulator	Each	3	11513	1828	34,539	5,484	40,023
10	Supply and erection of anticreep with cadmium copper catenary wire (65 Sq. mm) for Conventional/Tramway OHE with long creepage insulators.	Each	1	95,000	5,723	95,000	5,723	1,00,723
11	Supply and erection of long Creepage Path composite solid CORE cut-in-insulator (9 ton insulators).	Each	2	6602	1245	13,204	2,490	15,694
12	Supply and erection of long Creepage path composite suspension insulator	Each	2	18619	1128	37,238	2,256	39,494
13	Supply and erection of 1050 mm long Creepage post insulator	Each	4	6711	808	26,844	3,232	30,076
14	Supply and erection of section insulator assembly with core insulator suitable for Polluted zones and associated fittings & fasteners for conventional OHE including 9 tonne insulator assembly	Each	1	65,400	9,058	65,400	9,058	74,458
15	Supply and erection of a 25KV single pole isolator with/without earth contract assembly with post & Rod Insulators.	Each	1	1,29,007	7,156	1,29,007	7,156	1,36,163
16	Supply and erection of a 25KV double pole isolator with earthing heel with post & rod insulators.	Each	0	1,36,604	10,059	0	0	0
17	Supply and erection of copper jumper viz. 50/105/ 160 sq. mm for isolator jumpers etc.,	Nos.	10	8,247	1,829	82,470	18,290	1,00,760
18	Supply and Erection of 150 Sq. mm Copper Feeder Wire	Mtr	0	1250	165	0	0	0
19	Transfer of equipment from one mast or support to another.	Each	6	0	10577	0	63,462	63,462
20	Provision of an additional bracket assembly/assemblies on a mast or support	Each	10	0	1900	0	19,000	19,000
21	Dismantling of overhead equipment	Span	10	0	451	0	4,510	4,510
22	Splicing and extension of an anchored overhead equipment	Each	1	0	8112	0	8,112	8,112
23	Slewing of equipment (OHE)	Span	5	0	1855	0	9,275	9,275
24	Retrieval of traction mast	Each	6	0	8800	0	52,800	52,800
25	Dismantlement of OHE mast structure by cutting.	Each	6	0	3568	0	21,408	21,408
26	Dismantling of guy rod	Each	2	0	360	0	720	720
27	Dismantling of a Section Insulator	Each	1	0	1936	0	1,936	1,936
28	Dismantling of an Isolator	Each	1	0	2002	0	2,002	2,002
29	Dismantling of a Regulating equipment with Counter Weight Assembly	Each	1	0	2280	0	2,280	2,280

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30	Dismantling of a cantilever assembly with insulators	Each	10	0	1383	0	13,830	13,830
31	Supply and erection of structure bonds	Nos.	35	714	325	24,990	11,375	36,365
32	Supply and erection of longitudinal bonds	Nos.	100	714	325	71,400	32,500	1,03,900
33	Supply and erection of a Transverse and all types of special bonds	Nos.	6	850	325	5,100	1,950	7,050
34	Supply and erection of 25 KV AC OHE danger board,public/staff caution boards and all types of boards required for commissioning of OHE.	Nos.	6	2404	802	14,424	4,812	19,236
35	Supply and erection of level crossing height gauge as per RDSO's latest spec with danger boards (set of two)/as per site condition including foundations and other	Set	0	4,00,000	20,000	0	0	0
36	Supply and erection of shock treatment chart	Nos.	2	1225	250	2,450	500	2,950
37	Supply and erection of a single earth electrode.	Each	2	3500	4239	7,000	8,478	15,478
38	Supply and erection of earth bus with	Mtrs	40	208	58	8,320	2,320	10,640
39	Tower Car checking(Including Tower car hire charges if any),Preparation of documents,processing and obtaining EIG sanction.	LS	1	0	75000	0	75,000	75,000
40	First aid box (S & E)	Nos.	1	375	50	375	50	425
41	Supply & Erection of Aluminum Bus bar 36mmX28mm	Mtr	12	571	204	6,852	2,448	9,300
42	Supply & Erection of aluminum/Copper bus connectors,bus splice etc	Each	4	2663	33	10,652	132	10,784
43	Supply and erection, Oil filtration ,testing & commissioning of LT supply transformer (5 KVA/10 KVA) complete with DO fuse and insulator	Nos.	0	1,17,933	17,317	0	0	0
44	Extra for power block works	LS	1		75,000	0	75,000	75,000
Total						36,16,173	11,78,139	47,94,312
							SAY IN LAKHS	47.94


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 Jaisalmer Project

M/s. WONDER CEMENT LTD								
PROPOSED SIDING OF WCL TAKING OFF FROM SONU RAILWAY STATION								
ABSTRACT COST ESTIMATE FOR PROVISION OF 25 KV A.C SINGLE PHASE 50 HZ CONVENTIONAL REGULATED OHE IN LEAD LINE								
Sl. No.	Item Description	Unit	App. Qty	Rate		Total for		Amount (in Rs.)
				Material	Erection	Material	Erection	
1	Preparation of Designs and Drawings							
1	Preparation of designs and drawings for over head equipment viz.- sectioning cum wiring diagram, power supply diagram, Traction working rule diagram and instructions etc. required for commissioning of OHE including approval from Consultant, Client & Railway.	TKM	10.8	0	27,500	0	297000	297000
2	Supply & Erection of Concrete (M 15) for foundation and plinth in hard and Rock soil	Cum	50		8,200	0	410000	410000
3	Supply & Erection of Concrete (M 15) for foundation and plinth in other than hard and rock soil.	Cum	950		7,500	0	7125000	7125000
4	Supply and erection of all types of galvanized steel structures, small parts steel etc	MT	120	1,21,051	7,788	14526120	934560	15460680
5	Supply and erection of guy rod assembly.	Each	45	13,500	1,358	607500	61110	668610
6	Supply and erection of a single bracket assembly for Conventional OHE with long Creepage path Stay and bracket Composite insulators.	Each	310	25,000	1,938	77,50,000	6,00,780	83,50,780
7	Supply and erection of overhead equipment Conventional by manual with 107 sqmm contact wire and 65sqmm cad copper catenary wire with droppers & clips, jumpers and Large span wire etc.	TKM	10.8	0	195000	0	21,06,000	21,06,000
a	Supply of 107 sqmm Contact wire	KM	13	950000	0	1,23,50,000	0	1,23,50,000
b	Supply of 65sqmm cad copper catenary wire	KM	13	600000	0	78,00,000	0	78,00,000
c	LS wire	KM	0.2	1150000	0	2,30,000	0	2,30,000
8	Supply and erection of a regulating equipment (3 pulley type) with counter weight assembly for Conventional OHE.	Each	21	75,000	6,981	15,75,000	1,46,601	17,21,601
9	Supply & Erection Double conductor OHE Termination assembly with Insulator	Each	23	11513	1828	2,64,799	42,044	3,06,843
10	Supply and erection of anticreep with cadmium copper catenary wire (65 Sq. mm) for Conventional/Tramway OHE with long creepage insulators.	Each	13	95,000	5,723	12,35,000	74,399	13,09,399
11	Supply and erection of long Creepage Path composite solid CORE cut-in-insulator (9 ton insulators).	Each	4	6602	1245	26,408	4,980	31,388
12	Supply and erection of long Creepage path composite suspension insulator	Each	2	18619	1128	37,238	2,256	39,494
13	Supply and erection of 1050 mm long Creepage post insulator	Each	4	6711	808	26,844	3,232	30,076
14	Supply and erection of section insulator assembly with core insulator suitable for Polluted zones and associated fittings & fasteners for conventional OHE including 9 tonne insulator assembly	Each	2	65,400	9,058	1,30,800	18,116	1,48,916
15	Supply and erection of a 25KV single pole isolator with/without earth contract assembly with post & Rod insulators.	Each	2	1,29,007	7,156	2,58,014	14,312	2,72,326
16	Supply and erection of a 25KV double pole isolator with earthing heel with post & rod insulators.	Each	0	1,36,604	10,059	0	0	0
17	Supply and erection of copper jumper viz. 50/105/ 160 sq. mm for isolator jumpers etc.,	Nos.	22	8,247	1,829	1,81,434	40,238	2,21,672
18	Supply and Erection of 150 Sq. mm Copper Feeder Wire	Mtr	0	1250	165	0	0	0
19	Transfer of equipment from one mast or support to another.	Each	2	0	10577	0	21,154	21,154
20	Provision of an additional bracket assembly/assemblies on a mast or support	Each	2	0	1900	0	3,800	3,800
21	Dismantling of overhead equipment	Span	2	0	451	0	902	902
22	Splicing and extension of an anchored overhead equipment	Each	2	0	8112	0	16,224	16,224
23	Slewing of equipment (OHE)	Span	2	0	1855	0	3,710	3,710
24	Retrieval of traction mast	Each	2	0	8800	0	17,600	17,600
25	Dismantlement of OHE mast structure by cutting.	Each	2	0	3568	0	7,136	7,136
26	Dismantling of guy rod	Each	0	0	360	0	0	0
27	Dismantling of a Section Insulator	Each	0	0	1936	0	0	0
28	Dismantling of an Isolator	Each	0	0	2002	0	0	0
29	Dismantling of a Regulating equipment with Counter Weight Assembly	Each	0	0	2280	0	0	0


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30	Dismantling of a cantilever assembly with insulators	Each	2	0	1383	0	2,766	2,766
31	Supply and erection of structure bonds	Nos.	270	714	325	1,92,780	87,750	2,80,530
32	Supply and erection of longitudinal bonds	Nos.	900	714	325	6,42,600	2,92,500	9,35,100
33	Supply and erection of a Transverse and all types of special bonds	Nos.	30	850	325	25,500	9,750	35,250
34	Supply and erection of 25 KV AC OHE danger board,public/staff caution boards and all types of boards required for commissioning of OHE.	Nos.	6	2404	802	14,424	4,812	19,236
35	Supply and erection of level crossing height gauge as per RDSO's latest spec with danger boards (set of two)/as per site condition including foundations and other	Set	1	4,00,000	20,000	4,00,000	20,000	4,20,000
36	Supply and erection of shock treatment chart	Nos.	2	1225	250	2,450	500	2,950
37	Supply and erection of a single earth electrode.	Each	2	3500	4239	7,000	8,478	15,478
38	Supply and erection of earth bus with	Mtrs	40	208	58	8,320	2,320	10,640
39	Tower Car checking(Including Tower car hire charges if any),Preparation of documents,processing and obtaining EIG sanction.	LS	1	0	125000	0	1,25,000	1,25,000
40	First aid box (S & E)	Nos.	1	375	50	375	50	425
41	Supply & Erection of Aluminum Bus bar 36mmX28mm	Mtr	12	571	204	6,852	2,448	9,300
42	Supply & Erection of aluminum/Copper bus connectors,bus splice etc	Each	4	2663	33	10,652	132	10,784
43	Supply and erection, Oil filtration ,testing & commissioning of LT supply transformer (5 KVA/10 KVA) complete with DO fuse and insulator	Nos.	0	1,17,933	17,317	0	0	0
44	Extra for power block works	LS	1		75,000	0	75,000	75,000
Total						4,83,10,110	1,25,82,660	6,08,92,770
							SAY IN LAKHS	608.92


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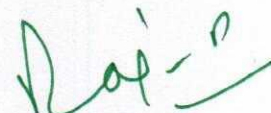
M/s. WONDER CEMENT LTD.								
PROPOSED SIDING OF WCL TAKING OFF FROM SONU RAILWAY STATION								
ABSTRACT COST ESTIMATE FOR PROVISION OF 25 KV A.C SINGLE PHASE 50 HZ CONVENTIONAL REGULATED OHE INPLANT YARD								
Sl. No.	Item Description	Unit	App. Qty	Rate		Total for		Amount (in Rs.)
				Material	Erection	Material	Erection	
1	Preparation of Designs and Drawings							
1	Preparation of designs and drawings for over head equipment viz.-sectioning cum wiring diagram, power supply diagram, Traction working rule diagram and instructions etc. required for commissioning of OHE including approval from Consultant, Client & Railway.	TKM	11	0	27,500	0	302500	302500
2	Supply & Erection of Concrete (M 15) for foundation and plinth in hard and Rock soil	Cum	50		8,200	0	410000	410000
3	Supply & Erection of Concrete (M 15) for foundation and plinth in other than hard and rock soil.	Cum	1010		7,500	0	7575000	7575000
4	Supply and erection of all types of galvanized steel structures, small parts steel etc	MT	130	1,21,051	7,788	15736630	1012440	16749070
5	Supply and erection of guy rod assembly.	Each	60	13,500	1,358	810000	81480	891480
6	Supply and erection of a single bracket assembly for Conventional OHE with long Creepage path Stay and bracket Composite insulators.	Each	330	25,000	1,938	82,50,000	6,39,540	88,89,540
7	Supply and erection of overhead equipment Conventional by manual with 107 sqmm contact wire and 65sqmm cad copper catenary wire with droppers & clips, jumpers and Large span wire etc.	TKM	11	0	195000	0	21,45,000	21,45,000
a	Supply of 107 sqmm Contact wire	KM	13.2	950000	0	1,25,40,000	0	1,25,40,000
b	Supply of 65sqmm cad copper catenary wire	KM	13.2	600000	0	79,20,000	0	79,20,000
c	LS wire	KM	0.5	1150000	0	5,75,000	0	5,75,000
8	Supply and erection of a regulating equipment (3 pulley type) with counter weight assembly for Conventional OHE.	Each	30	75,000	6,981	22,50,000	2,09,430	24,59,430
9	Supply & Erection Double conductor OHE Termination assembly with Insulator	Each	38	11513	1828	4,37,494	69,464	5,06,958
10	Supply and erection of anticreep with cadmium copper catenary wire (65 Sq. mm) for Conventional/Tramway OHE with long creepage insulators.	Each	10	95,000	5,723	9,50,000	57,230	10,07,230
11	Supply and erection of long Creepage Path composite solid CORE cut-in-insulator (9 ton insulators).	Each	4	6602	1245	26,408	4,980	31,388
12	Supply and erection of long Creepage path composite suspension insulator	Each	2	18619	1128	37,238	2,256	39,494
13	Supply and erection of 1050 mm long Creepage post insulator	Each	30	6711	808	2,01,330	24,240	2,25,570
14	Supply and erection of section insulator assembly with core insulator suitable for Polluted zones and associated fittings & fasteners for conventional OHE including 9 tonne insulator assembly	Each	24	65,400	9,058	15,69,600	2,17,392	17,86,992
15	Supply and erection of a 25KV single pole isolator with/without earth contract assembly with post & Rod insulators.	Each	10	1,29,007	7,156	12,90,070	71,560	13,61,630
16	Supply and erection of a 25KV double pole isolator with earthing heel with post & rod insulators.	Each	4	1,36,604	10,059	5,46,416	40,236	5,86,652
17	Supply and erection of copper jumper viz. 50/105/ 160 sq. mm for isolator jumpers etc.	Nos.	80	8,247	1,829	6,59,760	1,46,320	8,06,080
18	Supply and Erection of 150 Sq. mm Copper Feeder Wire	Mtr	0	1250	165	0	0	0
19	Transfer of equipment from one mast or support to another.	Each	4	0	10577	0	42,308	42,308
20	Provision of an additional bracket assembly/assemblies on a mast or support.	Each	4	0	1900	0	7,600	7,600
21	Dismantling of overhead equipment	Span	4	0	451	0	1,804	1,804
22	Splicing and extension of an anchored overhead equipment	Each	4	0	8112	0	32,448	32,448
23	Slewing of equipment (OHE)	Span	4	0	1855	0	7,420	7,420
24	Retrieval of traction mast	Each	4	0	8800	0	35,200	35,200
25	Dismantlement of OHE mast structure by cutting.	Each	4	0	3568	0	14,272	14,272
26	Dismantling of guy rod	Each	1	0	360	0	360	360
27	Dismantling of a Section Insulator	Each	0	0	1936	0	0	0
28	Dismantling of an Isolator	Each	0	0	2002	0	0	0
29	Dismantling of a Regulating equipment with Counter Weight Assembly	Each	0	0	2280	0	0	0


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30	Dismantling of a cantilever assembly with insulators	Each	4	0	1383	0	5,532	5,532
31	Supply and erection of structure bonds	Nos.	300	714	325	2,14,200	97,500	3,11,700
32	Supply and erection of longitudinal bonds	Nos.	1300	714	325	9,28,200	4,22,500	13,50,700
33	Supply and erection of a Transverse and all types of special bonds	Nos.	60	850	325	51,000	19,500	70,500
34	Supply and erection of 25 KV AC OHE danger board,public/staff caution boards and all types of boards required for commissioning of OHE.	Nos.	20	2404	802	48,080	16,040	64,120
35	Supply and erection of level crossing height gauge as per RDSO's latest spec with danger boards (set of two)/as per site condition including foundations and other	Set	0	4,00,000	20,000	0	0	0
36	Supply and erection of shock treatment chart	Nos.	4	1225	250	4,900	1,000	5,900
37	Supply and erection of a single earth electrode.	Each	8	3500	4239	28,000	33,912	61,912
38	Supply and erection of earth bus with	Mtrs	200	208	58	41,600	11,600	53,200
39	Tower Car checking(Including Tower car hire charges if any),Preparation of documents,processing and obtaining EIG sanction.	LS	1	0	150000	0	1,50,000	1,50,000
40	First aid box (S & E)	Nos.	1	375	50	375	50	425
41	Supply & Erection of Aluminum Bus bar 36mmX28mm	Mtr	50	571	204	28,550	10,200	38,750
42	Supply & Erection of aluminum/Copper bus connectors,bus splice etc	Each	20	2663	33	53,260	660	53,920
43	Supply and erection, Oil filtration ,testing & commissioning of LT supply transformer (5 KVA/10 KVA) complete with DO fuse and insulator	Nos.	0	1,17,933	17,317	0	0	0
44	Extra for power block works	LS	1		75,000	0	75,000	75,000
Total						5,51,98,111	1,39,93,974	6,91,92,085

**SAY IN
LAKHS**

691.92



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General Manager (Mines)
Wonder Cement Limited
Jaisalmer Project

M/s. WONDER CEMENTS LIMITED(WCL)
PROPOSED SIDING OF WCL TAKING OFF FROM SONU RAILWAY STATION
ABSTRACT COST ESTIMATE FOR PROVISION OF SEPERATE SSP WITH DEDICATED C.B AND OTHER ASSOCIATED EQUIPMENTS AT TAKE
OFF POINT INCLUDING FEEDER LINE

Sl. No.	Description	Unit	Unit Rate (Rs)			Total for		Amount (in Rs.)
			Qty	Supply	Erection	Material	Erection	
1	Design & drawing for SSP,feeder line including schematic drawings, SWR's etc. required for commissioning of SSP	Each	1	-	35,000	-	35,000	35,000.00
2	Supply & Erection of Concrete for foundation & plinth including cable trench							
2(a)	Supply and erection of foundation and plinth in hard soil and rock	Cum	2	8,200	818	16,400	1,637	18,036.90
2(b)	Supply and erection of foundation and plinth in other than hard soil and rock	Cum	100	7,500	743	7,50,000	74,329	8,24,329.00
3	Supply and erection of all types of galvanized steel structures, small parts steel etc	MT	11.5	1,21,051	7,788	13,92,087	89,562	14,81,648.50
4	Supply and Erection of 25KV CB	nos	1	4,35,000	7,500	4,35,000	7,500	4,42,500.00
5	Supply & Erection of 42 KV lightning arrestor with surge monitor,counter and cable	nos	2	57,780	2,120	1,15,560	4,240	1,19,800.00
6	Supply & Erection of 25 potential Transformer Type-I or Type-II	nos	2	64,500	2,120	1,29,000	4,240	1,33,240.00
7	Supply & Erection of 25 KV Current Transformer	nos	1	71,200	2,700	71,200	2,700	73,900.00
8	Supply and Erection of materials for Termination of all aluminium 25 KV feeder conductor single (spider) including feeder wire,suspension insulators	Mtr	1000	468	128	4,68,000	1,28,000	5,96,000.00
9	Supply & Erection of 25 KV pedestal insulators with fittings and fasteners	nos	6	6,526	452	39,156	2,711	41,866.92
10	Supply & Erection of 25 KV Single pole isolator 1250 A with rod & post insulator	nos	1	1,29,007	7,156	1,29,007	7,156	1,36,163.00
11	Supply & Erection of 25 KV Double pole isolator 1600 A with rod & post insulator with/without interlock	nos	1	1,46,399	20,187	1,46,399	20,187	1,66,585.67
12	Supply & Erection of Aluminum Bus bar 36mmX28mm	mtr	50	1,253	248	62,637	12,402	75,038.50
13	Supply & Erection of all types of Aluminum/copper bus connectors,bus splice,tee connectors,bus terminals required for commissioning of switching stations with fasteners	nos	15	4,844	418	72,658	6,264	78,922.05
14	Supply and erection of all types of copper jumper	nos	4	8,500	739	34,000	2,956	36,956.44
15	Supply of materials and erection of a large copper jumper (160 sq mm) between aluminum bus/OHE and cross feeder with all associated fittings	Each	2	11,500	904	23,000	1,807	24,807.28
16	Supply & Erection of Earthing arrangement at switching station i.e. earth electrodes,earth bus, 8 SWG GI wire etc. to achieve IR value for energisation	Job	1	17,500	1,750	17,500	1,750	19,250.00
17	Supply & Erection of copper strips for equipment earthing	mtrs	3	1,127	109	3,382	326	3,708.09
18	Supply & Erection of material for termination of copper cross feeder with gantries including cross feeder with 9-ton insulators	Set	2	3,253	325	6,506	650	7,155.58
19	Supply & Installation of cables for SWS	mtrs	120	175	13	21,000	1,504	22,503.60
20	Reinforced Concrete for Cable trench covers	M2	4	8,500	667	34,000	2,669	36,669.16
21	Supply & Erection of safety items i.e. Fire extinguishers,set of fire bucket with stand and first aid box,key box with suitable key chain,locks and other misc items required for commissioning of switching station	set	1	15,750	2,500	15,750	2,500	18,250.00
22	Supply & Erection of Shock treatment chart etc.	nos	2	1,253	84	2,505	167	2,672.50
23	Supply & Erection of Fencing panels,uprights,gate and anti-climbing device	Mtr	36	5,846	42	2,10,459	1,503	2,11,962.24

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24	Supply & Erection of Lead Acid batteries 40AH with Battery charges	Set	1	1,70,722	5,920	1,70,722	5,920	1,76,642.59
25	Supply, Erection, oil filtration, testing and commissioning of 25kV/240 Volts, 10KVA LT Supply transformers oil type with DO fuse switch, anti-climbing device, insulator, copper jumper and earth electrode etc.	Set	1	97,440	9,223	97,440	9,223	1,06,662.61
26	Electrification of Switching Station building as per specification	Each	1	-	54,703	-	54,703	54,702.59
27	Supply, erection, testing, and commissioning of control and numeric relay panel suitable for Single Circuit breaker as per latest RDSO specification.	nos	1	19,58,000	82,680	19,58,000	82,680	20,40,680.25
28	Supply, erection, testing & Commissioning of RTU at SSP including Modification/alteration to existing SCADA arrangements at Divisional Head Quarter remote control centre	Job	1	14,50,000	83,515	14,50,000	83,515	15,33,515.40
29	Supply and Spreading of 20mm gravel/ballast in switch Yard	cum	12	1,002	288	12,026	3,458	15,483.72
30	Testing, Processing for EIG and commissioning of SWS complete in all respect including handing over to railways.	LS	1	-	4,17,577	-	4,17,577	4,17,577.00
31	Manning of Switching Station for operation of SWS till commissioning of SCADA	Months	3	20,879	-	62,637	-	62,636.55
32	Construction of switching station building as per RDSO drawing including retaining wall, earth filling etc	LS	1	-	5,17,577	-	5,17,577	5,17,577.00
Total						79,46,031	15,86,412	95,32,443.14
							SAY IN LAKHS	95.32


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