



GOVERNMENT OF INDIA

भारत सरकार

MINISTRY OF RAILWAYS

रेल मंत्रालय

Indian Railways

Unified Standard Schedule

of Rates

**(Earthwork in Cutting & Embankment, Bridge Work
and P.Way Works)**

Engineering Department
2019

**Indian Railways Unified Standard Schedule of Rates For Earthwork in
Cutting & Embankment, Bridge Work and P.Way Works - 2019**

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CHAPTER - 1 : EARTH WORK			
Item No.	Description Of Item	Unit	Rate (Rs.)
EARTHWORK WITH DEFINED LEAD			
011010	Earth work in excavation as per approved drawings and dumping at embankment site or spoil heap, within railway land, including 50m lead and 1.5m lift, the lead to be measured from the centre of gravity of excavation to centre of gravity of spoil heap; the lift to be measured from natural ground level and paid for in layers of 1.5m each including incidental work, as per specifications		
011011	All kinds of soils	Cum	236.48
011012	Ordinary Rock (not requiring blasting)	Cum	380.04
011013	Hard Rock (requiring blasting)	Cum	620.12
011014	Hard Rock (blasting prohibited)	Cum	1070.97
011020	Extra over 011010 when controlled blasting is required and is carried out with approval of Engineer	Cum	242.37
011030	Extra over item 011010 for spreading and finishing of fill material on embankment by manual means in accordance with specifications	Cum	266.76
011040	Extra for manual compaction of earthwork, where permitted, with rammers	Cum	23.52
011050	Extra for lead of earth work above initial lead of 50m in all kind of soils and rocks :		
011051	For every 50 m or part thereof - lead over 50m and upto 150m	Cum	31.83
011052	For every 50m or part thereof - lead over 150m and upto 500m	Cum	25.58
011060	Extra for Crossing of railway track (each track). Note : This item is payable only where crossing of operational lines is involved.	Each Track	10% per Track
011070	Extra for every additional lift of 1.5m or part thereof after the initial 1.5m for earth work in all soils	Cum	21.98
Earthwork in New Lines, Doubling Projects Etc.			
012010	Earthwork in cutting (classified) in formation, trolley refuges, side drains, level crossing approaches, platforms, catch water drains, diversion of nallah & finishing to required dimension and slopes to obtain a neat appearance to standard profile inclusive of all labour, machine & materials and removing & leading all cut spoils either to make spoil dumps beyond 10m from cutting edge or for filling in embankment with leads within 2 km on either side of cutting edge, lifts, ascent, descent, loading, unloading, all taxes / royalty, clearance of site and all incidental charges, bailing & pumping out water, if required, etc. complete as per directions of the Engineer-in-Charge. The work is to be executed as per latest / updated edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow. Cut trees shall be property of Railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract. {Note - (i) All usable earth arising from cut spoils shall be led into bank formation and Unusable spoils shall be dumped / stacked (ii) All hard rock /and boulders not fit for filling will be stacked by the contractor and will be property of the Railways.}		
012011	In all conditions and classifications of soil except rock	Cum	131.51
012012	Soft rock not requiring blasting in all conditions	Cum	295.32
012013	In hard rock requiring blasting with explosives and blasting/drilling equipment Including all incidental work in all conditions. Rate includes cost of all explosive material.	Cum	470.52
012014	In rock and very hard rock with hammer / chisel / pavement breaker etc. where blasting is not permitted due to special circumstances and if specifically ordered in writing including drilling and all incidental work in all conditions	Cum	986.11

Item No.	Description Of Item	Unit	Rate (Rs.)
012015	In any other type of soil not covered above where classification is not possible	Cum	131.51
012020	Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, rain bunds, if provided, platforms etc. with earth excavated from outside railway boundary entirely arranged by the contractor at his own cost as per RDSO's latest guidelines and specifications and special condition of contract including all leads, royalty, lifts, ascents, descents, crossing of nallahs or any other obstructions. The rates shall include all dressing of bank to final profile, demarcation and setting out of profile, site clearance, removing of shrubs, roots of vegetations growth, heavy grass, benching of existing slope of old bank, all handling/re-handling, taxes, octroi and royalty etc. as a complete job. Cut trees shall be property of railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract. Types of good quality soil, as acceptable to Engineer-in-Charge.	Cum	191.02
012030	Extra for mechanical compaction of earth/blanketing material filled in embankment with contractor's rollers of suitable capacity, type and size to achieve specified density as per specification, testing as per IS codes including cost of water, T&P, consumable and all labour as a complete job. The work is to be executed as per Latest edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow.	Cum	47.04
012040	Laying and spreading blanketing materials (Natural or Mechanically prepared as per GE-1 or G.E.IRS-2) over new / old embankment / cutting in layers of 30cm in loose state to make the embankment of designed profile as per specifications. The rate is inclusive of initial site clearance, cutting of shrubs, removal of roots of vegetation growth & heavy grass, surfacing & leveling to give required slope, benching, if required on existing bank slope, dressing and finishing of bank, all lead & lift, ascent, descent, crossing of nallahs / other obstructions, spreading the material and final dressing of slopes and top surface as per specified camber using contractor's own machinery, equipment, T&P, labour etc. as a complete job. Note - The rate does not include supply / compaction of blanketing material at site which shall be paid separately.	Cum	165.03
012050	Finishing blanketing material, already compacted, in accordance with specification - over embankment including sides/cutting	100Sqm	1176.00
012060	Manufacturing and supplying approved quality blanketing materials (moorum, stone dust, coarse sand granular material etc.) as per RDSO specifications, properly stacked at site for measurement	Cum	1572.93
	MISCELLANEOUS :		
013010	Dressing surface (average excavation or filling upto 15 cm) including removing vegetation in all kind of soil. Payment against this item is to be made only if it is not included in earth work item.	10 sqm	161.91
013020	Daghdhel or lock spit 15cm deep & minimum width at top 20cm. Payment against this item is to be made only if it is not included in earth work item.	100 m	265.98
013030	Felling trees of girth (measured at a height of 1m above ground level) including lead and stacking of material within 100m. Note : 1. When stumps are grubbed up in addition, the rates shall be doubled for trees cut and grubbed 2. Payment for grubbing shall only be made where specially ordered. 3. Grubbing shall be ordered only where it is essential to remove the stumps, including the roots, as per specification. 4. Grubbing shall include removal of roots of trees and saplings to a depth of 60cm below ground level or 30 cm below formation level or 15 cm below sub grade level, whichever is lower.		

Item No.	Description Of Item	Unit	Rate (Rs.)
013031	Girth over 30 cm and upto 60 cm	Each	265.98
013032	Girth over 60 cm and upto 1.5m	Each	734.30
013033	Girth over 1.5m upto 3 m	Each	1462.79
013034	Girth over 3 m	Each	2451.46
013040	Benching slopes, cuts 30 cm in height and approximately 60 cm wide	Sqm	18.27
013050	Turfing / planting, including all lead & lift and watering as required until properly rooted with. Note - Initially payment of only 40% will be made. Balance 60% will be paid only after 3 months of maintenance period, if the turfing is properly rooted.		
013051	Turfing with sods, 10cm thick and 20cm square closely laid	100 Sqm	5097.82
013052	Turfing with planted doob grass	100 Sqm	4971.22
013053	Planting Sarkanda / sarpat or any other suitable species approved by the engineer	100 Sqm	5763.36
013060	Providing and laying Jute Geo-Textile (JGT) in slopes of Railway embankment in accordance with RDSO's guidelines for application of Jute Geotextile in Railway embankments and hill slopes no. RDSO/2007/GE:G-0008 or its subsequent versions, including incidental earthwork and fixing arrangements		
013061	With GJ - Type 1	Sqm	65.98
013062	With GJ - Type 2	Sqm	73.13
013063	With GJ - Type 3	Sqm	87.08
013070	Cleaning out silt from bed of reservoir/canals including 50m lead and lift upto 1.5m	Cum	157.27
013080	Cleaning side drains in cuttings by the side of track (Kutchra or Pucca) including disposal of the debris, soil, muck etc. as directed by the engineer. Note - Rates are for disposal at the end of cutting. Disposal of debris/soil/muck beyond end of cutting to be paid for under relevant lead item.		
013081	Lead within cutting is up to 50m	Cum	265.98
013082	Lead within cutting is over 50m and up to 200m - for every 50m or part thereof	Cum	73.45
013083	Lead within cutting exceeds 200m - for every 100m or part thereof	Cum	73.45
013090	Earth work in filling in embankment from Railway land for repairing of cess/formation/level crossing, rain cuts etc. to make the surface to the desired level and slope to the entire satisfaction of Engineer-in-charge. The rate will include free lead upto 200m, all lifts, descends, ascends, crossing of track/road/nallah etc. including breaking of clods etc and compaction by rollers/rammers/temping rods etc. Note - This item is only to be paid when specially ordered in writing.	Cum	167.67
013100	Extra rate for quantities of works executed. Note - The extra percentage rate is applicable in respect of each item, but limited to quantities of work executed in these difficult conditions.		
013101	In or under water and/or liquid mud, including pumping out water as required. Note - In or under water means locations/levels where there is continuous ingress of water.	Cum	20%
013102	In or under foul position, including pumping out water as required. Note - Foul position means filthy and unhygienic conditions where physical movements are hampered such as soil mixed with sewage or night-soil.	Cum	25%

Item No.	Description Of Item	Unit	Rate (Rs.)
013110	Providing and removing barricading with the help of portable fencing along running track where work is to be done in close vicinity of track. Fencing shall consist of self supporting steel angles of size 50mm x 50mm x 6mm, 1.5m long provided with hooks etc. and embedded in CC 1:2:4 block of size 0.23m x 0.23m x 0.23m placed at c/c distance of 2m along track. 12mm dia rods in three horizontal layers shall be tack welded with angle posts. {Note : Released material will be property of the contractor after completion of work. Cost of cement to be paid separately}		
013111	With provision of one 50mm wide retro-reflective tape in horizontal direction, duly secured/tight with vertical posts	Metre	196.45
013112	With provision of painting verticals & horizontals with red luminous paints / strips of 30cm each with a gap of 30 cm	Metre	102.91
013120	Supplying and laying of Biaxial Geo-grid, made from virgin high density polypropylene, having aperture size of 65mmx 65mm, weight of 320 gms/sqm and ultimate tensile strength of 30 kN/m with minimum junction efficiency of 95% & minimum radial stiffness of 350 kN/m (@0.5% strain) and laying below ballast over formation, including transportation, contractor's labour, lead and lift complete as per directions of Engineer-in-charge	Sqm	317.72
013130	Supplying and laying of Woven Geotextile made from polypropylene multifilament yarn, having minimum mass of 240 GSM & ultimate tensile strength of 40 kN/m with puncture resistance of 600 N and apparent opening size of 150 microns and laying at interface of sub-grade and blanketing layer, including transportation, contractor's labour, lead and lift complete as per directions of Engineer-in-charge	Sqm	137.29
013140	Supplying, driving and erecting in all types of soils hard wood pile 5m to 7m long without joint, 125mm average dia. for protection of bank slope including two coats of coal tar paint complete, as directed {Note - Payment will be made as per actual driven length of pile}	Metre	374.71
013150	Driving rails 90R/52 Kg section below average ground level within the slope/toe of embankment including chiseling at the end with contractor's own arrangement complete in all respect {Note - Payment will be made as per actual driven length of rail which will be supplied free by Railways}	Metre	392.55
013160	Driving 'Z' section MS sheet piles side by side in all kinds of soil mechanically or manually as per approved drawing with contractor's own arrangement complete in all respect, as directed by engineer in-charge {Note - Payment will be made as per actual driven length of pile}	Sqm	3264.98
013170	Supplying and fixing bitumen drum sheet by nailing to wooden piles 125 mm dia., supplied and driven by contractor complete with nails/hooks to prevent earth against slippage, as per approved drawing & as directed	Sqm	655.09
013180	Supplying & providing pre-fabricated vertical drain - Techdrain TD 3520U or similar, with polypropylene core and wrapped with non-woven Geotextile with minimum 100mm width & 4mm composite material thickness and inserting with the help of mechanical / hydraulic rigs, in the very soft clay for draining out sub-soil water and quick consolidation of site, excluding the cost of instrumentation, if required	Metre	183.84

Item No.	Description Of Item	Unit	Rate (Rs.)
013190	Supplying & laying woven polypropylene Geotextile, indigenously manufactured from black UV stabilized polypropylene flat tape and fibrillated tape yarn with minimum 5.3 meter width, laid below ballast over formation for seperation cum reinforcement application or for hill slopes for erosion prevention, including transportation, contractors labour, lead & lift complete as per directions of Engineer in-charge.	Sqm	158.05
013200	Supplying, laying and fixing reinforced Non-woven composite of 60 kN/m x 60 kN/m tensile strength with minimum width of 5 metre, indigenously manufactured from needle punched Polypropylene Non-Woven Geotextile, reinforced with high tenacity polyester yarn on the prepared formation for seperator cum filtration cum reinforcement application for rehabilitation of existing track and construction of new track, to have clogfree blanket designed layer for extended life. The job includes transportation , labour, tools & plants, lead/lift etc., as directed by Engineer in-charge	Sqm	340.37
013210	Supplying, laying and fixing knitted and PVC coated polyester Biaxial Geogrid having weight of 350 gm/sqm with tensile strength of 30 kN/m x 30 kN/m for Base reinforcement with a minimum width of 5metres, indigenously produced for Rail Track Bed stabilisation, below the ballast layer for higher frictional / shear resistance by interlocking behaviour	Sqm	236.32
013220	Supplying, laying & fixing needle punched & mechanically bonded Non-woven Geotextile of minimum 5 metre width, made from high quality Polypropylene / Polyester Fibres, having apparant opening size of 70 microns and laying for seperator cum filtration cum drainage application at interface of prepared sub-grade & blanketing layer including transportation, labour, lead & lift complete as directed by Engineer in-charge for -		
013221	Geo-textile having minimum mass of 300 GSM, ultimate tensile strength of 25 kN/m and puncture resistance of 4 kN	Sqm	248.06
013222	Geo-textile having minimum mass of 200 GSM, ultimate tensile strength of 20 kN/m and puncture resistance of 2 kN	Sqm	191.96
013230	Supplying, laying & fixing needle punched & mechanically bonded Non-woven Geotextile of minimum 5 metre width, made from high quality Polypropylene / Polyester Fibres, having apparant opening size of 80 microns, minimum mass of 600 GSM, ultimate tensile strength of 40 kN/m and puncture resistance of 6.5 kN and laying for seperator below ballast and above blanketing layer including transportation, labour, lead & lift complete as directed by Engineer in-charge	Sqm	430.73
	Tunnelling Items :		
014010	Providing, fabricating and fixing in position Permanent Structural Steel Supports, as directed including cost of all materials, machinery, labour, cutting, bending, welding, grinding, lighting, ventilation, drainage and all other ancillary operations etc. complete with initial lead upto 1km and all lifts	MT	83324.85
014020	Providing, fabricating and fixing in position Temporary Structural Steel Supports, as directed and dismantling the same before concreting including cost of all materials, machinery, labour, cutting, bending, welding, grinding, lighting, ventilation, drainage and all other ancillary operations etc. complete with initial lead upto 1km and all lifts alogwith depositing released materials in designated store or as directed by Engineer in-charge	MT	85406.26

Item No.	Description Of Item	Unit	Rate (Rs.)
014030	Providing and fixing 25mm dia. Steel Rock Bolts with mechanical / wedge type Anchorage including drilling 35mm dia. holes, providing 15cm long & 20mm thick steel tapered wedge, 10mm thick plate washers & nuts, tightening bolt by torque wrench with all materials, machinery, labour, ventilation, lighting, drainage & all other ancillary operations etc. complete with initial lead upto 1km & all lifts	Metre	607.93
014040	Providing and fixing 25mm dia. Steel Rock Bolts with Resin Bond Cement Capsules Anchorage including drilling 35mm dia. holes, inserting grout capsule, driving bolt, fixing of 10mm thick plate washers & nuts, tightening the same by torque wrench after hardening of cement grout with cost of all materials, machinery, labour, ventilation, lighting, drainage and all other ancillary operations etc. complete with initial lead upto 1km & all lifts	Metre	700.85
014050	Providing and fixing Hard Variety Jungle Wood for lagging / blocking locations in tunnel, wherever required including cost of all materials, machinery, labour, fixing in position, lighting, ventilation, drainage etc. complete with all leads & lifts	Cum	51347.59
014060	Providing and constructing UCRS Masonry with approved stones from tunnel excavated muck in 1:6 cement mortar for back-filling over cuts/slips on tunnel sides due to geological faults etc. including cost of all materials, machinery, labour, cleaning, scaffolding, packing mortar, wedging stone chips, curing, lighting, ventilation, drainage etc. complete with all leads upto 1km & all lifts, excluding cost of cement. { Cement Qty. (in qtl.)- 0.83}	Cum	1808.57
014070	Excavation for ADIT by Tunnelling methods in all types of Rock including cost of all other materials, machinery, labour, scalling excavated surface, ventilation, lighting, drainage, removing & hauling excavated muck outside ADIT upto specified dump area and all other ancillary operations etc. complete with initial lead upto 1km and all lifts	Cum	2196.16
014080	Excavation for vertical / inclined shaft in all types of soft/hard Rock including cost of all other materials, machinery, labour, scalling excavated surface, ventilation, lighting, drainage, removing & hauling excavated muck outside shaft upto specified dump area and all other ancillary operations etc. complete with initial lead upto 1km and all lifts	Cum	2760.77
014090	Excavation for Tunnel by tunnelling methods in Rock not requiring supports including cost of all other materials, machinery, labour, scalling excavated surface, removing undercuts, ventilation, lighting, drainage, removing & hauling excavated muck outside tunnel upto specified dump area and all other ancillary operations etc. complete with initial lead upto 1km and all lifts	Cum	2327.18
014100	Excavation for Tunnel by tunnelling methods including excavation for supports in all types of soils / rock strata requiring supports (excluding cost of providing supports) including cost of all other materials, machinery, labour, scalling excavated surface, ventilation, lighting, drainage, removing & hauling excavated muck outside tunnel upto specified dump area and all other ancillary operations etc. complete with initial lead upto 1km and all lifts	Cum	2506.98
014110	Excavation for Tunnel by Heading and Benching tunnelling methods including excavation for supports in all types of soils / rock strata requiring supports (excluding cost of providing supports), including cost of all other materials, machinery, labour, scalling excavated surface, ventilation, lighting, drainage, removing & hauling excavated muck outside tunnel upto specified dump area and all other ancillary operations etc. complete with initial lead upto 1km and all lifts	Cum	2658.44

Item No.	Description Of Item	Unit	Rate (Rs.)
014120	Extra to USSOR Item nos. 014070 to 014110, if muck is to be carried out through shaft, using winch and mucking tub system	Cum	156.57
014130	Removing and hauling muck, fallen due to natural causes, such as Geological faults etc., out of Tunnel including breaking large fragments by blasting, if necessary and disposing off the same in specified dump area or as directed including cost of all other materials, machinery, labour, ventilation, lighting, drainage and all other ancillary operations etc. complete with initial lead upto 1km and all lifts	Cum	1411.92
014140	Dewatering tunnel by pumping out water, collected by natural drainage inside tunnel including providing sump, wherever necessary including cost of all other materials, machinery, labour, ventilation, lighting, drainage and all other ancillary operations etc. complete	KwHr.	79.52
014150	Providing and laying in-situ vibrated M-10 grade Cement Concrete using 40mm down size approved, clean, hard, graded aggregates crushed from tunnel excavated muck for filling and levelling over-cuts in bed due to geological faults etc. including cost of all materials, machinery, labour, cleaning bed, batching, mixing, conveying and laying, levelling, compacting, finishing, curing, lighting, ventilation, drainage etc. complete with initial lead upto 1km and all lifts. { Cement Qty. (in qtl.)- 1.75}	Cum	2119.97
014160	Providing and laying in-situ vibrated M-20 grade CC using 40mm down size approved, clean, hard, graded aggregates crushed from tunnel excavated muck for kerb and bed lining, including cost of all materials, machinery, labour, formwork, batching, mixing, conveying upto placing point in agitator cars, placing in position, levelling, vibrating, finishing, curing, lighting, ventilation, drainage etc. complete with initial lead upto 1km and all lifts { Cement Qty. (in qtl.)- 1.75}	Cum	2484.56
014170	Drilling 32mm dia. Grout Holes in concrete / rock by percussion drilling, using jack hammer or stopper drills, as directed to specified depth for consolidation / contact grouting including cost of all materials, machinery, labour, cleaning holes, ventilation, lighting, drainage and all other ancillary operations etc. complete	Metre	142.31
014180	Drilling 75mm dia. vertical or inclined Holes in Rock / Concrete in tunnel by percussion drilling, using waggon drill or other suitable drilling equipments, including cost of all materials, machinery, labour, ventilation, lighting, drainage etc. complete	Metre	278.82

CHAPTER - 2 : Bridge Works Substructure				
Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
021010	Exploratory drilling of boreholes down to required depth, drilling of 150mm dia. boreholes in all type of soils except hard rock & large boulders (boulder core more than 30cm) including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion/chieselling tool for advancing through occasional seams of hard strata to be employed, where necessary in Dry area			
021011	0m to 10m	Meter	1335.73	
021012	10m to 20m	Meter	1393.80	
021013	20m to 30m	Meter	1858.40	
021014	30m to 40m	Metre	1974.55	
021015	40m to 50m	Metre	2032.63	
021016	50m to 60m	Metre	2090.70	
021017	60 m to 70 m	Metre	2206.85	
021020	Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30cm), including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chieselling tool for advancing through occasional seams of hard strata to be employed where necessary in River bed area including standing/flowing water upto 2m depth with all necessary arrangements			
021021	0m to 10m	Metre	3740.03	
021022	10m to 20m	Metre	3873.60	
021023	20m to 30m	Metre	4007.18	
021024	30m to 40m	Metre	4140.75	
021025	40m to 50m	Metre	4274.32	
021026	50m to 60m	Metre	4407.89	
021027	60m to 70m	Metre	4675.04	
021030	Extra for 150mm dia. bore in hard Rock/large Boulder at all levels	Metre	5226.75	
021040	Drilling of NX size borehole (75mm dia.) in all types of hard rock (fresh rock) and collection of rock core samples from boreholes and preserving in boxes			
021041	0m to 10m	Metre	4274.32	
021042	10m to 20m	Metre	4341.11	
021043	20m to 30m	Metre	4675.04	
021044	30m to 40m	Metre	5342.90	
021045	40m to 50m	Metre	5610.05	
021046	50m to 60m	Metre	5743.62	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
021047	60m to 70m	Metre	5877.19	
021050	Conducting in-situ full size Plate Load Test (PLT) at selected location as per IS:1888 including making loading arrangements & casting of RCC/cast in-situ concrete footing as per codal provisions including excavation and refilling of trial pit			
021051	a. Plate size 30cm x 30cm	Each	20907.00	
021052	b. Plate size 45cm x 45cm	Each	26714.50	
021053	c. Plate size 60cm x 60cm	Each	39491.00	
021060	Conducting in situ Vane shear test for soil as per IS:4434	Each	2555.30	
021070	Conducting SCPT for soil as per IS:4968	Each	40652.50	
021080	Conducting DCPT for soil as per IS:4968	Each	33683.50	
021090	Conducting determination of California Bearing Ratio as per IS:2720	Each	5226.75	
021100	Taking out 100mm dia. & 450mm long undisturbed samples of soil from bore holes, including provision of air tight containers for packing and, labelling incl. transporting the samples to laboratory. Piston sampler shall be used for extracting undisturbed samples where necessary. Samples shall be collected as per IS:2720.	Each	119.63	
021110	Taking out 100mm dia. & 450mm long disturbed samples of soil from bore holes, including provision of air tight containers for packing, labelling and transporting the samples to laboratory. Samples shall be collected as per IS:2720.	Each	127.77	
021120	Conducting standard penetration test as per IS:2131 at approximate 1.5m intervals in bore holes, as directed by the Engineer in charge	Each	199.78	
021130	Collection of water samples at required intervals	Each	197.46	
021140	Conducting laboratory Tests on collected soil samples as per relevant IS code			
021141	Moisture Contents/Dry Density	Each	813.05	
021142	Atterberg Limit	Each	813.05	
021143	Specific Gravity	Each	464.60	
021144	Grain size analysis including Hydrometer analysis	Each	1045.35	
021145	Direct Shear Test	Each	2090.70	
021146	Natural Density	Each	522.68	
021147	Consolidation Test	Each	2090.70	
021148	Unconfined Compression Test	Each	2090.70	
021149	Tri-axial Test	Each	2090.70	
021150	Conducting Laboratory tests on collected ROCK SAMPLES as per relevant IS code			
021151	Density Test	Each	522.68	
021152	Water Absorption & Porosity	Each	929.20	
021153	Hardness	Each	522.68	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
021154	Unconfined Compression Test	Each	2090.70	
021155	Point Load Test	Each	929.20	
021156	Modulus of Elasticity	Each	4646.00	
021157	Abrasion Testing	Each	1742.25	
021160	Conducting in-situ Portable Impulse Plate Load Test with 'Light Drop Weight Tester', having plate size of 300mm & weight of 10 Kg at identified locations as per ASTM E2835-11, for measurement of compaction quality of soil {modulus of deformation (Evd) for correlation to Dpr%} and for evaluation of load carrying capacity in stages of formation construction	Each	768.36	
021170	Conducting chemical analysis of ground water samples to determine suitability for concreting and aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	2787.60	
021180	Conducting chemical analysis of soil samples to determine aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	3368.35	
021190	Preparation and submission of Final report giving complete and comprehensive record of investigations, laboratory test reports and calculations in approved format	Each	67367.00	
	OPEN FOUNDATION			
022010	Earthwork in excavation for foundations and floors of the bridges, retaining walls etc. including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil upto a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge			
022011	All kinds of soils	Cum	264.71	
022012	Ordinary rock	Cum	437.33	
022013	Hard rock (requiring blasting)	Cum	695.56	
022014	Hard rock (blasting prohibited)	Cum	960.70	
022020	Extra for the quantity of works, executed in or underwater and/or liquid mud including pumping out water as required	Cum	20% of basic item	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
022030	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, vibrating, pumping and bailing out water where ever required with all materials and labour complete but excluding the cost of cement and shuttering as per drawings and technical specifications as directed by Engineer	Cum	3303.00	2.2
022040	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in RCC raft foundation & Pile cap including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement, admixtures and shuttering shall be paid extra.	Cum	3944.07	4.22 or as per appd. Design mix.
022050	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M20 grade (Cast - in Situ) using 20 mm graded crushed stone aggregate and coarse sand of approved quality in Abutment, pier, wing walls and return walls of Mass cement concrete above RCC raft Including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement, admixtures and shuttering shall be paid extra.	Cum	3706.23	3.44 or as per appd. Design mix.

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
022060	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality for the following Reinforced cement concrete structural elements up to height of 5m from foundation top level, including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement, admixtures & shuttering shall be paid extra			
022061	Abutment & Pier	Cum	4338.47	4.22 or as per appd. Design mix.
022062	Wing wall and Return wall	Cum	4338.47	
022063	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	Cum	4535.68	
022064	Approach slab at formation level, Dirt wall/ ballast wall at formation level	Cum	4535.68	
022065	Extra for every increase of 1m or part thereof in the height above 5m	Cum/ m height	79.27	
022070	Providing, driving and installing Bored cast in-situ Reinforced Cement Concrete piles of specified diameter and length below pile cap in M-35 grade Design Mix Cement Concrete, using 20mm graded crushed stone aggregate and coarse sand of approved quality, to carry a safe working load not less than specified, excluding the cost of casing pipe and length of pile to be embedded in pile cap etc. complete, concreting by machine batching, machine mixing, scaffolding, using Admixture in approved proportion (as per IS:9103), placing with tremie pipe, chipping off of pile top to remove laitance concrete above cut off level etc., pumping and bailing out water with all labour material complete including crossing of tracks if required, as per approved drawing, specification and direction of the Engineer in charge. Length of the pile for payment shall be measured upto the bottom of pile cap excluding the mud mat. Payment for cement, Admixture, casing pipe & reinforcement shall be paid extra.			
022071	1500 mm diameter	Metre	18336.04	7.561 or as per appd. Design mix.

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
022072	1200mm diameter	Metre	12102.42	4.836 or as per appd. Design mix.
022073	1000mm diameter	Metre	9610.45	3.36 or as per appd. Design mix.
022074	800mm diameter	Metre	6021.35	2.18 or as per appd. Design mix.
022075	600mm diameter	Metre	3995.89	1.209 or as per appd. Design mix.
022080	Providing, fabricating and installing casing pipe for bored piles for all diameters with specified thickness of steel plate including all labour, materials, pumping and bailing out water wherever required, complete as per technical specifications as directed by Engineer in charge. This will include the weight of plate only and no cognizance will be given for the fittings, i.e. rivets and welding etc.	MT	93319.70	
022090	Extra for chieselling in addition to boring of piles, if chieselling is resorted to in hard rock or big stone boulders larger than 30cm depth by any means, i.e. by chiesel or manual chiesel and hammer method			
022091	1200mm diameter pile	Metre	3650.13	
022092	1000mm diameter pile	Metre	2790.36	
022093	800mm diameter pile	Metre	2110.36	
022094	600mm diameter pile	Metre	1370.01	
022100	Conducting load testing of a single pile upto following capacity in accordance with IS:2911 (Part-IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. with all labour, material, tool & plants, equipment, machinery, etc. complete as per drawing and specification, as directed by the Engineer			
022101	Initial load test upto 50 ton capacity pile	Each	70386.90	
022102	Initial load test above 50 ton capacity upto 100 ton capacity pile	Each	140367.28	
022103	Initial load test above 100 ton capacity upto 250 ton capacity pile	Each	180380.95	
022104	Extra for every increase of 50 T in pile capacity or part thereof over 250 T	Each	14785.90	
022105	Routine Load Test upto 50 ton capacity pile	Each	58481.53	
022106	Routine Load Test above 50 ton capacity upto 100 ton capacity pile	Each	116788.83	
022107	Routine Load Test above 100 ton capacity upto 250 ton capacity pile	Each	156779.27	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
022110	Lateral load testing of single pile in accordance with "IS Code of practice IS:2911 (Part-IV) for determining safe allowable lateral load of pile" with all labour, material, tool & plants, equipment, machinery, etc complete as per drawing and specification as directed by the Engineer			
022111	Piles with lateral load capacity of upto 10 ton	Each	35251.53	
022112	Piles with lateral load capacity of above 10 ton & upto 20 ton	Each	47087.21	
022113	Piles with lateral load capacity of above 20 ton	Each	69651.91	
022120	Pulse Echo Test (PET) for integrity testing of piles with contractor's men, materials and machines. The rate includes cost of Inspection of site, preparation of pile head and any other unforeseen cost required for the test, submission of reports in triplicate as per satisfaction of the Engineer in Charge at site.	Each	2636.61	
022130	Supplying, spreading and compacting well graded hard stone of 63mm average size (maximum upto 80mm size) in the bottom of foundation of box culverts, bridges etc. including all lead, lift, ascent, descent etc. complete job as per directions of Engineer In-charge	Cum	1156.46	
	WELL FOUNDATION			
023010	Earth work in OPEN excavation in foundation of bridges, for placing of well curbs of all shapes and designs in all kinds of soil including taking out the excavated soil, levelling, ramming of bottom of excavation and trimming of sides, returning the soil in layers, consolidation, disposal of surplus soil within a lead of 300m, including all lift, dewatering, shoring and strutting complete as per technical specification and as directed by Engineer in charge. (compaction of surplus soil when led to the bank will be paid as per relevant item separately)	Cum	422.73	
023011	Extra to item for Earthwork in excavation over item no. 023010, if the excavation is carried out in Rock not requiring blasting	Cum	279.68	
023012	Extra for Earthwork in excavation over item 023010, if excavation is carried out requiring controlled blasting or chieselling where required and permitted by the engineer in charge	Cum	521.99	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
023020	Providing and constructing Temporary Earthen Island / coffer dam for construction of well foundations, including bailing and pumping out of water, provision of sand bags, wooden ballies, sheet piling, earth, sand or any other suitable material, in water depth upto 1.5m, as required with all labour and material complete job			
023021	For well size (longest dimension) upto 10m	Each	42896.98	
023022	For well size (longest dimension) above 10m	Each	254388.94	
023030	Supplying, Fabrication, assembly, erection & placing in position the cutting edge of well curb with structural steel including MS sheet/Plates of specified thickness for pier/abutment complete as per approved plans and as per direction of Engineering In charge including all operations like cutting, bending, straightening, drilling holes, bolting, riveting, welding, threading, jointing of steel sections including outer and inner places liners and skin plates, stiffeners, hooks, bottle nuts, bond rods etc. as per design including all ascent, descents, leads, lifts, handing, re-handling, all other obstructions whatsoever, diverting channels, pumping / bailing out of water wherever required including cost of steel such as flats, sheets, angles, steel bars etc. with all labour and material as a complete	MT	102706.71	
023040	Dry/Wet Sinking of Circular Wells (Other than pneumatic method) in all types of strata except hard rock requiring ballasting, including bailing and pumping out water, removal of excavated soil with all labour and material required for sinking as per drawing and direction of the Engineer in charge, disposal of surplus soil upto 1 km lead in the adjoining bank/embankment (compaction to be paid separately under the relevant item)			
023041	From initial level of cutting edge & upto 3m depth	Cum	157.01	
023042	From 3m to 10m depth	Cum	217.15	
023043	From 10m to 20m depth	Cum	328.01	
023044	From 20m to 30m depth	Cum	760.57	
023045	From 30m to 40m depth	Cum	1934.89	
023046	From 40m to 50m depth	Cum	4922.37	
023047	From 50 m depth onwards	Cum	12522.51	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
023050	Dry/Wet Sinking of Twin D type Wells (Other than pneumatic method) in all types of strata except hard rock requiring ballasting, including bailing and pumping out water, removal of excavated soil, with all labour and material required for sinking as per drawing and direction of the Engineer in charge including disposal of surplus soil in the adjoining bank or within the zone including disposal of surplus soil in the adjoining bank or within the zone including compaction (compaction to be paid separately under the relevant item)			
023051	From initial level of cutting edge & upto 3m depth	Cum	245.04	
023052	From 3m to 10m depth	Cum	369.72	
023053	From 10m to 20m depth	Cum	558.46	
023054	From 20m to 30m depth	Cum	1280.28	
023055	From 30m to 40m depth	Cum	3226.30	
023056	From 40m to 50m depth	Cum	8130.27	
023057	From 50m depth onwards	Cum	20488.27	
023060	Extra for sinking of wells in hard rock requiring controlled blasting including cost of explosive, detonators, chieselling including all other ancillary works	Cum	759.22	
023070	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in the following elements of well including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per drawings and technical specifications as directed by Engineer. Payment for cement, reinforcement, admixtures and shuttering shall be paid extra			
023071	In well Kerb	Cum	3880.16	4.22 or as per appd. Design mix.
023072	In Steining of wells	Cum	3880.16	4.22 or as per appd. Design mix.
023073	In Bottom plug for wells including arrangements for placing concrete under water with tremie or bottom opening skips	Cum	4699.86	4.22 or as per appd. Design mix.
023074	In Intermediate/top plug without shuttering	Cum	5404.84	4.22 or as per appd. Design mix.

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
023075	In Intermediate/Top plug with internal shuttering	Cum	5404.84	4.22 or as per appd. Design mix.
023076	In Well cap and corbel, if provided	Cum	5404.84	4.22 or as per appd. Design mix.
023080	Supplying and filling ordinary sand/excavated river bed material, if approved in between bottom plug and top plug in wells including all lead lift handling, re-handling, as a complete job. Sand should be simultaneously filled with water for three days to achieve full compaction so that further chances of shrinkage due to voids are eliminated.	Cum	1695.16	
023090	Erection of disposable working platform to drill bore hole through flowing/standing water through river bed upto water depth of 1.5m, if necessary and dismantling after completing work and removing from the site to clear the water way. (The serviceable material, if any will be the property of Railway and shall be deposited in the designated stores as directed by the engineer in-charge)	Cum	3585.42	
	RCC BOX			
024010	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ/Pre-cast) in bottom/top slab, side walls, toe wall and sumps haunch filling head walls or any other component using 20mm graded crushed stone aggregate and coarse sand of approved quality of cast in-situ RCC box of size upto 5m (bigger inside dimension) including finishing, Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability, complete as per drawings and technical specifications as directed by Engineer in charge. Payment for cement, reinforcement, admixtures and shuttering shall be paid extra.	Cum	3968.57	4.22 or as per appd. Design mix.

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
024020	<p>Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Mass Cement Concrete M-20 grade (cast in-situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in Drop and curtain wall and alike structures below bed level, including the cost of centring, shuttering and finishing complete as per drawings and technical specifications as directed by Engineer. Payment for cement & reinforcement shall be paid extra.</p> <p>{Note: The shuttering, scaffolding, centring, reinforcement, placing of reinforcement and cost of cement to be paid extra under relevant items}</p>	Cum	3700.74	3.44 or as per appd. Design mix.
024030	<p>Excavation in formation / foundation for insertion of precast RCC box, having linear waterway upto 3m for single line, including dismantling of existing bridge, built with stone masonry / cement concrete in foundation & superstructure, rock/stone below or above bed level, removing existing ballast and filling with Railway's Moorum / Earth / Sand over top and beside the box after launching of precast Box on new alignment during block period and / or under traffic conditions and underneath the R.H. Girder, if required with contractor's three Excavators of 200 HP capacity or above (2 working + 1 spare); Hammer Drill - 1 No.; Tippers - 2 Nos. and Tractors - 2 Nos. with all contractor's labour, tools/plants, machinery, consumables etc. including all lead, lift, loading, unloading and stacking of all serviceable materials at nominated locations, disposing of un-serviceable materials and clearing debris away from the vent way for free flow of water including making approaches for movement of machinery & materials and as directed by Engineer in-charge.</p>			

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
	<p>Conditions : (1) Unit of 'Each Bridge' means bridge of span(s) with a total linear waterway upto 3m across one track; (2) The contractor shall arrange minimum necessary machineries, e.g. 'Excavator' of 200 HP capacity or above - 3 nos. (2 working + 1 spare), Stone Breaker - 1 no., Tippers - 2 nos., Tractors - 2 nos. and all other required machineries etc. in good working condition at site of work; (3) Rate shall include transportation of all machineries at site of work including oils, other consumables, tools/plants, driver batta etc. (4) During excavation at site, if rock / boulders are met with, contractor shall break / demolish rock / boulders of any size & quantity and dispose it at nominated place for proper insertion of box and Railway will not pay extra cost for this work; (5) Work shall be carried out under offered traffic block. If due to any reason, traffic block is not granted, no extra payment shall be made. Contractor shall keep his labour, machinery, equipments etc. at site till completion of work and as per instruction of</p>			
024031	(a) Surcharge upto 1 metre	Each Track	143210.63	
024032	(b) Extra to Item no. 024031 for additional surcharge of every one metre or part thereof	Each Track	19975.48	
024040	<p>Launching of precast RCC Box of any thickness and height, having linear water-way upto 3.0 metre for single track, consisting of precast units of 1.0 to 4.0 metres length in stages as per approved drawing, depending upon requirement at site to correct alignment including shifting of precast RCC Box units from casting location to bridge site with all leads before launching, with contractor's 100 MT capacity road cranes (2 working + 1 spare) and one road trailer of 20 MT carrying capacity including dismantling, laying and packing of track after launching of Box and till allowing the first train to move at non-stop 20 kmph speed. Work shall be carried out with all contractor's men, materials, crane, tools, lead & lift etc. including bringing these to site of work, making approach road to bridge & crossing of tracks wherever necessary, complete and as directed by Engineer in-charge</p>	Each Track	359080.63	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
	{Conditions : (1) Contractor shall keep cranes, trailer etc. in good working condition and shall be in readiness before grant of block; (2) Work shall be carried out under offered traffic block and if due to any reason, traffic block is not granted; no extra payment will be made. Contractor shall keep his labour, machinery, equipments etc. at the site till completion of work and as per instructions of Engineer in-charge; (3) Contractor shall keep RH Girder ready for insertion in case it is required to be inserted during traffic block. If RH Girder is inserted into track, extra payment will be made separately for transportation and placement of these Girders}			
	MISCELLANEOUS			
025010	Deduct if 40mm graded stone aggregate is used in place of 20mm graded stone aggregate in any grade of concrete. (deduction to be made for quantity of concrete)	Cum	-58.08	
025020	Providing and applying two coats of coal tar or bitumen confirming to IS:3117-1965 on the top and sides of RCC box/slabs @ 1.70 kg/sqm after cleaning the surface with all labour and materials complete job as directed by the Engineer	sqm	142.05	
025030	Centring and shuttering including strutting, propping etc. and removal of form for :			
025031	All types of bridge sub-structures, e.g. pier, abutment, wing wall, retaining wall, RCC box type foundations, Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc. upto 5m above ground level	sqm	523.29	
025032	All types of bridge super-structures, e.g. slabs, I-girders, T-girders, Box girders etc. upto 5m above ground level	sqm	680.51	
025033	Extra for additional height over item no. 025031 & 025032 wherever required with adequate bracing, propping etc. over initial height of 5 metres for every additional height of 1 metre or part thereof	sqm/m	84.44	

Item No.	Description of Item	Unit	Rate (Rs.)	Cement Qty. (qtl)
025040	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M-35 grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in jacketing of piers and abutments from bottom of foundation upto a height of 10m including finishing for average 30cm thickness of jacketing. Payment for reinforcement, cement, wire mesh, shuttering, drilling of holes and insertion of rods will be made extra.	sqm	1546.99	4.03 or as per appd. Design mix.
025041	Drilling 32mm dia. holes for jacketing / anchoring	metre	127.44	
025042	Inserting of dowel bars of specified dia. (cost of rods to be paid extra)	metre	11.20	

CHAPTER - 3 : Bridge Works Super Structure- RCC				
Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
031010	Providing and laying in position Design Mix Cement Concrete of all grades machine mixed, machine vibrated and machine batched using 20mm graded crushed stone aggregate and coarse sand of approved quality for cast in-situ Prestressed (Post tensioned) concrete girder / Box girders for spans upto 18.3m (centre to centre) including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability complete as per specifications and direction of the Engineer in-charge. Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, sheathing, anchorage cones, stressing of cables and grouting of the ducts will be done extra.			
031011	With Soffit level upto 9m above Bed level	Cum	3944.63	4.30 or as per appd. Design mix.
031012	With Soffit level From 9m above Bed Level to 12m above Bed Level	Cum	5192.16	4.30 or as per appd. Design mix.
031013	With Soffit level From 12m above Bed Level to 15m above Bed Level	Cum	5504.04	4.30 or as per appd. Design mix.
031014	Extra over USSOR Item no. 031013 for Soffit level beyond 15m above Bed Level for every 1m or part thereof	Cum/m	104.33	
031015	Extra for increase in span by every 1m or part thereof for spans above 18.3m	m/Cum or part thereof	141.76	4.30 or as per appd. Design mix.
031016	Deduct for casting of Slab instead of Girders (for any heights)	Cum	567.06	
031020	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M-40 grade using 20mm graded crushed stone aggregate and coarse sand of approved quality for the Precast Prestressed (Post tensioned) concrete girder/Box (spans upto 30.5m) in contractor's casting yard, including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability, complete as per specifications and direction of the Engineer. Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, anchorage cones, stressing of cables and grouting of the ducts will be done extra. Launching of girder/slab in position is not included in this item.	Cum	3944.63	4.30 or as per appd. Design mix.
031021	Deduct for casting of Slab instead of Girder/Box	Cum	567.06	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
031030	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M-40 grade using 20mm graded crushed stone aggregate and coarse sand of approved quality for the Precast Prestressed (Pre tensioned) concrete girder (spans upto 9.1m) in contractor's casting yard, including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties without impairing strength and durability, complete as per specifications and direction of the Engineer. Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, sheathing, anchorage cones, stressing of cables and grouting of the ducts will be done extra. Launching of girder/slab in position is not included in this item	Cum	4498.95	4.30 or as per appd. Design mix.
031031	Deduct from 031030 for casting of Slab instead of Girder	Cum	567.06	
031032	Supplying and laying in position M-40 grade precast prestressed cement concrete ballast retainers of size, as directed by Engineer In-charge	Cum	4149.61	
031040	Design, manufacturing, supplying and fixing in position elastomeric bearing pads under prestressed concrete girder, for Pre-cast as well as cast-in-situ girders as per approved drawing. The rate shall include cost of load test of one no. bearing from Railway approved firms and all fixing materials, equipments, machineries, labour, taxes, loading, unloading, leading, lifting etc.complete. Rates include getting the drawing approved from Railway and cost of inspection during manufacturing from railway approved organization. (Note : 1. The rate is for finished item complete and paid only after fixing in position below the girder. 2. The volume shall be given in the drawing and no deduction shall be made for inserted steel plates etc.)	Cu Cm	1.61	
031050	Providing and fixing in position of standard preformed sealed and slab type or strip seal elastomeric type expansion joints for Railway bridge or Road Over Bridges as per approved drawings and latest MOST/IRC specifications. The rates are inclusive of supplying, fixing with contractor's own materials, e.g. inserts, bolts, socket tubes, Neoprene sheet/cap etc., equipments, machineries, labour, all taxes, royalty, all lead & lifts, transport, testing, surface preparations, complete			
031051	For 40mm expansion	Metre	26009.32	
031052	For 80mm expansion	Metre	37211.05	
031053	For 120mm expansion	Metre	43486.63	
031054	For 160mm expansion	Metre	49784.64	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
031060	Load testing of one or more spans of bridge as selected by the Engineer as per approved load test procedure following relevant IS/IRC/Railway codes with contractor's labour, deflection measuring instruments, loading materials, recoding and analyzing the load testing results including all lead & lift, etc. complete as required. The rates are all inclusive and will be paid after load test is finished and girder is cleared of the kentledges/loading material etc. The load shall be 1.25 times the stipulated design load, based on design load & not span			
031061	For Span design load upto 100 MT	Each	157792.97	
031062	Extra for every increase of 100 MT or part thereof in the span load capacity upto 800 MT	Each 100 MT	156699.66	
031070	Providing, fabricating & fixing in position to exact design profiles, prestressing H.T.S. cables of all classification made from Low Relaxation strands conforming to IS:14268-1995 in Prestressed Concrete girders/slabs etc. including supplying, cutting, making into cables with necessary spacers, colour coding, protecting with water soluble oil at all time, anchoring of cables, supplying and placing spiral corrugated type galvanized metal steel ducts sheathing made up of Cold Rolled Cold Annealed (CRCA) mild steel conforming to IS:513 of required diameter/ thickness, vent pipe, placing, bending, routing, fixing, stressing & grouting of cable ducts with cement grout, Anchorage sets in required number with provision for future prestressing, if any including all lead and lift with contractor's own materials, labour, equipments etc. complete as per drawings & specifications. Rate also includes covering anchorage pads with epoxy mortar of approved quality to avoid corrosion. Cement for grouting to be paid separately.	MT	153647.84	As per actual site consumption
031071	Deduct for not using CRCA sheathing & other related items for pretensioned members from item 031070	MT	38289.33	
031072	Extra for using HDPE sheathing instead of CRCA sheathing	MT	133.57	
031080	Making suitable designed staging for casting of PSC girders on over head in cast in-situ method and slewing them to the exact location to proper level and alignment complete on to the bed blocks or pedestals with all contractors materials. Rate includes cost involved for various arrangements required for staging, slewing, lifting, lowering with all the contractors materials, machinery, tools and plants	Cum	3967.42	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
031090	Launching of PSC girders casted by any method approved by Engineer or steel girders and placing them to correct alignment and level over the bed block / pedestal. The PSC girder shall be precast at casting bed developed at site. The cost of the casting bed will be paid extra. The rate includes cost involved for various arrangements, suitable capacity cranes, men and machinery, lifting, lowering etc.	MT	1737.13	
031100	Pushing / Insertion of already cast RCC Box through existing embankment below running rail traffic for all heights and depths including normal to embankment or in skew, by mechanical jack pushing technique as per approved drawing including all types of enabling works such as excavation of approaches, cutting of banks upto required level, disposal of surplus earth outside railway land, alignment of boxes, as per scheme approved by railway and as directed by the Site Engineer. It includes provision of cutting edge, cost of all types of jacks, all lead, lift, ascends, descends, loading, unloading, handling, rehandling, crossing of stream, nallah, Railway track, level crossing etc. or any other obstruction, cost of all safety works and safety precautions as a complete job. (Note : 1. Payment for construction of thrust bed and RCC box shall be paid separately. 2. After completion of work, released cutting edge will be the property of contractor.)	Per Metre per Sqm	18571.71	
031110	Providing and Laying only CE marked Knitted and PVC coated Polyester Uniaxial Geogrid, ingeniously manufactured from selected high tenacity polyester yarn with high molecular weight (> 25000 g/mol), and low carboxyl end group (<30m mol/kg) for Reinforced Earth Wall (extruded PP geogrids & Polyester strips & Geostrips not allowed) with granular fill of PHI-32 degree (design is to be carried out in accordance with BS-8006 / FHWA) with concrete block (M-35) as facia, casting & erection of blocks with Techgrid, providing & laying of levelling pad of M-15, providing and laying coping beam (M-35), providing and laying 300mm thick filter-media etc. completed as per approved drawing and instruction of engineer in-charge excluding providing, laying and compacting selected backfill and retained fill behind the wall, excavation and ground improvement, if any. The reinforced earth wall and slope should have 100% coverage of 5m width Knitted and PVC coated Polyester Geogrid of Techfab India. (Coating of Geogrid/ Reinforcing geosynthetic material with LDPE, Latex, Bitumen and any other coating will not be allowed and will not be accepted).			
031111	For Wall Height 1m to 4m	Sqm	6722.69	
031112	For Wall Height 4m to 6m	Sqm	5786.43	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
031113	For Wall Height 6m to 8m	Sqm	5767.96	
031114	For Wall Height 8m to 10m	Sqm	6281.38	
031115	For Wall Height 10m to 12m	Sqm	7394.45	
031116	For Wall Height 12m to 14m	Sqm	7958.26	
031120	Fabrication of precast concrete structures in the designated plant as per design, using M-50 grade concrete with proper graded aggregate, 53-grade Ordinary Portland Cement, admixtures conforming to IS:9103, high yield deformed bars at 10% to 12% by weight of concrete, lifting hooks for erection; produced under controlled factory environment {cost includes inspection and testing by Railway's approved agency} for Precast Concrete Columns, Beams, Staircase, Landings, Handrails, Slabs, Foundation Footings etc.	Cum	58270.21	As per appd. Design mix.
031130	Fabrication of Precast Prestressed Concrete Structures in the designated plant, as per design using M-50 grade Concrete with proper graded aggregate, 53-grade Ordinary Portland Cement, admixture conforming to IS:9103, high yield deformed bars Fe-500, High tensile steel (pre-stressing strands) of approved make and size, necessary corrugated ducts for grouting & stressing, lifting hooks for erection; prestressing done as per design using callibrated pump & jacks {cost includes inspection and testing by Railway's approved agency} for :			
031131	Precast Prestressed Concrete Beams and Hollow-core Slabs with 12 steel strands of 12.7mm dia. conforming to IS:1785	Cum	61822.85	As per appd. Design mix.
031132	Precast Prestressed Hollow-core slabs, 200mm thick with upto 10 strands of 12.7mm dia.	Cum	61593.65	As per appd. Design mix.
031133	Precast Prestressed Hollow-core slabs, 160mm thick with upto 8 strands of 12.7mm dia.	Cum	61421.75	As per appd. Design mix.
031140	Transportation of Precast Concrete Structures, such as Columns, Beams, Slabs, Staircase assembly etc. from manufacturing plant to the site of construction on 20 ton capacity trailer trucks duly tightened and secured for safe transport without causing any damage to the structures; Complete job including loading / unloading and properly stacking as per direction of Engineer in-charge with lead upto 100 km	MT	2006.23	
031150	Additional lead of every 10 kms or part thereof over 100 km and upto 3000 km over Item no. 031140	MT per 10Km lead	46.10	
031160	Erection of Precast factory-made concrete structures, such as Column Footings, Columns, Beams, Staircase assembly, Hollow-core Slabs, Handrails etc.; complete job including erection, fixing, assembling with proper supports and fixing with nuts/bolts and grouting using non-shrink grouts, as directed by Engineer In-charge. {Note - excavation, base concrete etc. shall be paid separately under relevant items of USSOR for various uses)	Cum	3997.42	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
031170	Designing, casting and launching of Pre-stressed Concrete Girders for construction of Road under Bridges / Railway Bridges with deck slab including diaphragm with contractor's construction scheme, approved by Railway including side kerbs and 0.90m wide box type foot path on one side and ballast retainer on other side or as required as per site condition with M-45 / M-50 Grade controlled concrete of approved mix by weigh batching, using 20mm and down grade hard granite stone aggregate of approved quality, admixture etc. including casting PSC Girders, pre-stressing and grouting in stages, supplying and fixing Elastomeric / Pot-PTEF / Pot Bearings at both ends complete work as per approved relevant drawings in accordance with the relevant Codes and treating deck with M-25 grade cement concrete wearing coat of 75mm thickness at centre and 50mm thick at edges, applying hot bitumen of 80/100 (1.7 kg/sqm) over surface of wearing coat as per approved drawing all inclusive but excluding cost of cement, reinforcement etc., which shall be paid separately under relevant items.			
031171	For girders of spans 18 metres and above with 5.7m overall width	Per Metre of Clear Span	86982.10	4.50 or as per appd. Design mix.
031172	Add or deduct in rates of USSOR Item no. 031171 for every one metre or part thereof increase or decrease in overall width of girder	Per Metre Width of Girder	15260.02	4.50 or as per appd. Design mix.
031173	For girders of spans less than 18 metres with 5.7m overall width	Per Metre of Clear Span	78924.31	4.50 or as per appd. Design mix.
031174	Add or deduct in USSOR Item no. 031173 for every one metre or part thereof increase or decrease of overall width of girder	Per Metre Width of Girder	13846.37	4.50 or as per appd. Design mix.
031180	Providing Flood Level Gauges on abutments and piers, made by 20mm thick 1:4 cement plaster for a width of not less than 300mm, duly engraving markings & figures in metres, divided into 10 parts commencing from under-side of girders towards bed, painting markings & figures with black enamel paint in three coats on white background including painting HFL Mark in white by side of gauge with year of occurrence with all Contractor's materials, labour, tools, scaffolding and supports, lead & lifts, curing etc. complete as per approved drawing and as directed by the Engineer in-charge	Sqm	487.63	0.09

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
031190	Designing, casting, lowering and launching of PSC 'I' / Box Girders for Road over Bridges with deck slab (cast in-situ or precast) M-45 to M-50 grade concrete of approved mix by weigh batching, using 20mm & down graded hard granite stone aggregate, admixture etc. including casting PSC girders on piers (or casting on bed and launching on to bed blocks) without causing any disruption to normal running traffic as per railway's approved drawing for making overall width as specified in GAD and prestressing & grouting in stages as per relevant Codes and keeping girder in position on bearings, including supplying & fixing Elastomeric / Pot-PTFE / Pot Bearings as per Railway's approved drawings including providing cement concrete wearing coat 75mm uniform thickness etc. complete all inclusive but excluding cost of cement, reinforcement etc., which will be paid as per item in respective schedule as per specifications and as directed by Engineer in-charge			
031191	For girders of spans 25m & above with 12m overall width and to required construction depth	Per Metre of Centre to Centre Span	82693.67	4.50 or as per appd. Design mix.
031192	Add or deduct in USSOR Item no. 031191 for every one metre or part thereof increase or decrease of overall width of girder	Per Metre Width Of Slab	6891.14	4.50 or as per appd. Design mix.
031193	For girders of spans less than 25 metres with 12m overall width and to required construction depth	Per Metre of Centre to Centre Span	72540.24	4.50 or as per appd. Design mix.
031194	Add or deduct in USSOR Item no. 031193 for every one metre or part thereof increase or decrease of overall width of girder	Per Metre Width Of Slab	6045.02	4.50 or as per appd. Design mix.
031200	Casting of pre or post - tensioned PSC Slab units of spans as per Railway approved design & drawing, using M-45 grade controlled concrete with all contractor's materials, labour, tools/plant & machinery including all lead & lift complete excluding cost of cement & reinforcement which shall be paid as per item in the respective schedule and as directed by Engineer in-charge	Cum	15074.88	4.50 or as per appd. Design mix.
031210	Extra over USSOR Item no. 031200 for casting skewed angle slabs instead of regular shaped slabs	Cum	1507.49	4.50 or as per appd. Design mix.
031220	Providing and fixing in position GI Drainage Spouts of required length with Grating in RCC slab and filling bitumen along kerb as shown in drawing with contractor's pipes, bitumen, tools, equipment, lead, lifts etc. complete as per specifications and as directed by Engineer in-charge			
031221	50mm dia. Drainage Spouts	Metre	470.13	
031222	100mm dia. Drainage Spouts	Metre	1005.36	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
031230	Reinforced Cement Concrete M-30 / M-35 / M-40 grade for RCC deck slab on Steel 'I' girder cast-in-situ, using controlled concrete by weigh batching / using RMC with contractor's materials, steel shuttering, staging, scaffolding, supports, labour, tools, plant & machinery, lead/lifts, curing etc. complete including leaving necessary reinforcement rods for providing parapet as per approved drawings and MOST standard drawings & specifications, as directed by Engineer in-charge but excluding cost of cement & reinforcement steel {cost of cement & steel will be paid as per items under respective schedule items}	Cum	4017.71	4.50 or as per appd. Design mix.
031240	Applying Epoxy Poly-sulphate Paint three coats on existing bottom surface of deck slab including cleaning surface of dirt, dust & other foreign matter, sand papering, wire brushing as required with all contractor's materials tools, machinery, scaffolding, lead, lifts etc. complete as per specifications and as directed by Engineer in-charge	Sqm	269.00	
031250	Supplying and laying 160mm dia. PVC Pipes Class-I, capable for a pressure of 2.5 kg/sqm in footpath of ROB for laying cable with all contractor's materials labour, tools, plant, machinery, vehicles, consumables, lead, lift etc. complete as per specifications and as directed by Engineer in-charge	Metre	455.57	

CHAPTER - 4 : Bridge Works : Super Structure- Steel			
Item No.	Description Of Item	Unit	Rate (Rs)
	Note- Items in this chapter are for works not requiring traffic block unless otherwise specified in the relevant item. All items are for clear span upto 45.7m unless otherwise specified.		
041010	Supplying of all types of structural steel conforming to Fe 410 B of IS:2062, fabrication, assembling, erection / slewing / end launching of steel girders (not requiring traffic block) upto 45.7m span on sub-structure including provision of trolley refuges, if required complete as per approved drawing including one coat of Zinc chrome primer to IS:104 & one coat of Zinc Chrome Red Oxide to IS:2074 and painting as per IRS-B-1 on all members (detailed fabrication and erection drawings & launching methodology will be prepared and got approved by the contractor from Railway). Rate includes fabrication of all the types of battens, bracings, ties, stiffeners, packing, diaphragms, shop rivets / welding, T&F bolts, drifts, shop welds, templates, jigs, fixtures, back up supports, accessories, transporting various components from fabrication shop to site, including loading, unloading, lift and taxes complete, assembly of girders' on-drifts/bolts, field riveting/welding, assembling of temporary support for side slewing, raising of girders to the bed block level, providing sliding arrangements and slewing the girder in position, lowering of girder on bearings and bed plates, grouting holes in the bed block for fixing of HD bolts/anchor pins of bed plates, all temporary arrangements. Load testing may be done under Chapter-5. The bearing sets to be provided with the girders will be paid separately as per relevant item separately.		
	Payment Schedule		
	(i) Material at site – 40%		
	(ii) Fabrication at site – 15%		
	(iii) Erection/Launching – 20%		
	(iv) Completion incl. painting & finishing – 25%		
041011	Plate Girder/Semi Through Girder	MT	108688.60
041012	Open web Girder	MT	121422.95
041013	Extra for metalising including preparation of surface and applying one coat etch primer to IS:5666	Sqm	713.89
041014	Extra for using steel conforming to Fe 490 of IS:8500 instead of Fe 410	MT	1161.50
041015	Deduct for using steel conforming to Fe 410 A of IS:2062 instead of Fe 410 B	MT	1161.50
041020	Assembling and erection of fabricated material including rocker and roller bearings with crane/derrick at site on sub structure with labour, equipment, T&P including site riveting/welding with all temporary arrangements, scaffolding etc. with contractors design and scheme for longitudinal launching/side slewing (not requiring traffic block) approved by Railway. Rate includes field rivets / welding, drifts, service bolts etc. as per drawings		
041021	Plate Girder/Semi Through Girder	MT	22585.10
041022	Open Web Girder	MT	25192.57

Item No.	Description Of Item	Unit	Rate (Rs)
041030	Fabricating, supplying and fixing in position Galvanized steel channel sleepers of mild steel of tested quality conforming to IS:2062, on fabricated girders including all fixtures fastenings as per approved Railway drawings with labour, material, tools and plants etc. as a complete job including galvanizing of all components	MT	119575.59
041031	Extra for working under running traffic/traffic block conditions on item 041030	MT	20027.02
041040	Fabricating, supplying and fixing of 6mm to 8mm thick steel chequered plate conforming to IS:3502 for pathway, trolley refuges, floor for the bridge including fixing the same over steel channel sleepers by drilling holes in channel sleepers and trolley refuges including nuts & bolts, tools & plants, labour as a complete job	MT	81307.90
041050	Metallising of steel work of girder with grit blasting as per IRS-B1-2001 following by one coat of etch primer (as per IS:5666) one coat of Zinc Chrome primer (as per IS:104) and two coats of aluminium paint (as per IS:2339) with all labour, T&P and material as a complete job	Sqm	858.02
041060	Providing and fixing 65/50 mm nominal dia B class G.I. pipe railing used in rows for footpath or anti-crash barrier railing including cost of M.S. angle and channels in vertical posts, riveting, welding / rivetting, priming painting two coats, at all heights labour and material as a complete job	Kg	91.89
041070	Supplying and fixing anti-slip M.S. Angles/nosing 65mmx 65mmx 8mm or any other size conforming to IS:2062 fixing 10mm dia, anchor bar 600mm c/c and fixing with main girder with M.S. flat on top of step of stair case, making anti-slip grooves 7 nos. arrangement for keeping and maintaining in position as per approved plan with all labour and material as a complete job.	Kg	92.31
041080	Providing/fixing/leaving/grouting various size HTS bolts / holding down bolts in concrete column or in other structural steel member with proper nuts, bolts, washers/plates as a complete job. Note - Cement used in grouting will be paid separately under relevant item.	Kg	126.61
041090	Providing, cutting, fabricating, treating, fixing & painting structural steel conforming to IS:2062 in access ladders, inspection platforms, Trolley refugee, railing etc. joints welded to neat finish including one coat of primer & two coats of synthetic enamel paints	MT	91598.94
041100	Supplying, fitting and fixing in position true to line and level cast steel rocker bearing complete as per IS :7666, IS:9565, IS:1030, IS:919, IS:3073 and as per Bridge Code including all accessories as per drawing and Technical Specifications	MT Bearing Capacity	535.36
041110	Supplying, fitting and fixing in position true to line and level forged steel roller bearing conforming complete as per IS:7666, IS:9565, IS:1030, IS:919, IS:3073 and as per Bridge Code including all accessories as per drawing and Technical Specifications	MT Bearing Capacity	584.04
041120	Supplying, fitting and fixing in position true to line and level sliding plate bearing with PTFE Surface sliding on stainless steel as per BS:3784, BS 5400, complete including all accessories as per Drawing and Technical Specifications	MT Bearing Capacity	1497.38

Item No.	Description Of Item	Unit	Rate (Rs)
041130	Design, supplying, fitting and fixing in position true to line and level elastomeric bearing conforming to IS:3400, IS:226, BS-5400 complete including all accessories as per drawing and Technical Specifications	Cu Cm	0.01
041140	Supplying, fitting and fixing in position true to line and level POT-PTFE bearing consisting of a metal piston supported by a disc or un reinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel / fabricated structural steel, metal and elastomer elements complete as per IS:2062, IS:1030, AISI:304, AISI:316, IS:6911, BS:3784, IS:3400, IS:226, BS-5400, Bridge Code and as per drawing and approved Technical Specifications. The design of the bearings shall be submitted by the manufacturers / contractor and got approved from Railway before fixing. Test report of the bearings should be got approved before the materials are lifted from the manufacturer premises. Payment is based on 250 MT capacity of Bearing.		
041141	POT-PTFE Bearing	MT Bearing Capacity	536.88
041142	POT Bearing	MT Bearing Capacity	512.61
041143	PIN Bearing	MT Bearing Capacity	440.51
041150	Providing vertical guide bearings as per approved drawings and fixing them with transversal and longitudinal stoppers using reinforced neoprene pads and PTFE-SS sliding system as per approved drawings and specifications. Payment is based on 180 MT capacity of Bearing.	MT Bearing Capacity	462.64
041151	Longitudinal stopper bearings	MT Bearing Capacity	447.87
041152	Transverse stopper bearings	MT Bearing Capacity	621.85
041160	Supply & applying two coats of bitumen emulsion of Grade RS-1, conforming to IS:8887 (latest) on the top surface of steel deck slab (New bridges) @ 1.70 kg/sqm after cleaning surface with all materials, labour, tools and plants, equipment etc. complete.	Sqm	146.50
041170	Painting steel works (new bridges) with two cover coats of red oxide paint conforming to IS:123 (latest) as per IRS-B1-2001 to give an even shade with all labour & material including scaffolding, shuttering and strutting alongwith provision of Jhoola/hanging scaffolding where required	Sqm	107.37
041180	Providing road crane of different capacity with different jib length revolving type for material handling, assembly & erection of girders/slab/RCC Box etc.		
041181	12MT capacity with 36 feet jib	Day	4785.38
041182	25MT capacity with 60 feet jib	Day	5981.73
041183	40MT capacity with 75 feet jib	Day	11963.45
041184	75MT capacity with 75 feet jib	Day	28712.28
041185	100MT capacity with 75 feet jib	Day	38283.04
041186	150MT capacity with 75 feet jib	Day	119634.50
041187	Extra for increase in road crane capacity with jib of desired length over Items 041181 to 041186 for every additional 5 MT capacity or part there of	MT	348.45

Item No.	Description Of Item	Unit	Rate (Rs)
041190	Cleaning of steel work of bridge girders upto 30.5m clear span with scrappers and/or wire brushes to remove all rust and loose or perished paint to prepare perfectly clean & dry bare metal surface free from all dirt/foreign material & ready for initial coat of paint. Rate includes cost of labour, consumables, brushes, tools & plants, ladders, scaffoldings, jhoola, hanging scaffolding staging etc.	Sqm	39.26
041200	Surface preparation for cleaning of steel work of bridge triangulated girders with scrappers and/or wire brushes to remove all rust and loose or perished paint to prepare perfectly clean & dry bare metal surface free from all dirt/foreign material & ready for initial coat of paint. Rate includes cost of labour, consumables, brushes, misc. tools and plants, ladders, scaffoldings, jhoola, hanging scaffolding, staging etc.	Sqm	58.90
041210	Surface preparation for painting of bridge girders and other steel structures where the finishing coat shows signs of deterioration; but primer coat of paint is sufficiently in good condition and there are no signs of rusting etc. Surface shall be cleaned free from oil grease, scaling and other foreign matters without disturbing the primer coat {Rate includes cost of labour, consumables, tools & plants, scaffolding, jhoola, ladder etc.}	Sqm	40.85
041220	Painting cleaned bridge plate girders including all scaffolding, shuttering and strutting along with provision of Jhoola / hanging scaffolding where required		
041221	With one coat ready mix Zinc Chromate conforming to IS:104 followed by one coat of Zinc Chromate red oxide conforming to IS:2074	Sqm	65.17
041222	With two cover coats of ready-mixed paint to IS:13607 with colour/shades, as decided by Engineer-incharge	Sqm	78.95
041223	With two coats Aluminium paints in dual containers conforming to IS:2339	Sqm	71.63
041224	With two coats epoxy paint	Sqm	98.98
041230	Painting cleaned bridge girders exceeding 30.5m clear span including all scaffolding, shuttering and strutting along with provision of Jhoola / hanging scaffolding where required		
041231	With one coat ready mix red lead conforming to IS:102	Sqm	45.32
041232	With one coat ready mix Zinc Chromate conforming to IS:104 followed by one coat of Zinc Chromate red oxide conforming to IS:2074	Sqm	69.96
041233	With two cover coats of ready-mixed paint to IS:13607 with colour/shades, as decided by Engineer-incharge	Sqm	83.74
041234	With two coats Aluminium paints in dual containers conforming to IS:2339	Sqm	76.42
041235	With two coats epoxy paint	Sqm	103.77

Item No.	Description Of Item	Unit	Rate (Rs)
041240	Supplying and applying Zinc Film Galvanization on Steel Girder Bridges for corrosion protection with Zinc Rich High Performance Coating System loaded with fine, lamellar and spherical zinc particles having diameter, length and breadth in the range of 5 to 15 microns, blended in neutral resins for long life protection against corrosion of steel, as per RDSO specification no. M&C/PCN/125-2009 alongwith inspection and all the mentioned tests on the product with coating of Zinc Rich Paint and Zinc Solvent of required DFT (Dry Film Thickness) including surface preparation (mechanical cleaning) by sand / grit blasting to Sa 2.5 of ISO specification no. 8501-88 and application by spray / brush painting on the prepared surface with all labour, material including scaffolding, shuttering and strutting alongwith provision of Jhoola/hanging scaffolding wherever required and T&P etc. as a complete job for -		
041241	DFT (Dry Film Thickness) Coating of 80 micron for Rural & Arid environment	Sqm	2059.80
041242	Extra over Item no. 041241 for DFT (Dry Film Thickness) Coating of 120 micron for Medium Industrial & Marine environment	Sqm	698.79
041243	Extra over Item no. 041241 for DFT (Dry Film Thickness) Coating of 200 micron for Severe Industrial & Marine environment	Sqm	2104.82
041250	Supply, fabrication and erection of bed plate of approved sizes in exact position over bed block on pier/abutments by giving full and even bearing, setting them on the layer of free flow non-shrinkable grouting compound, scrapping or chipping of bed block, if required, fabrication and fixing of HD bolts of suitable sizes alongwith nuts, washers etc., drilling holes of required size, grouting of holes by epoxy mortar after fixing HD bolts. Total work to be done during traffic block.		
041251	Upto 12.2m clear span	Kg	338.83
041252	More than 12.2m, but upto 18.3m clear span	Kg	423.53
041253	More than 18.3m, but upto 30.5m clear span	Kg	564.95
041260	Assembling and erecting pre-fabricated structures, such as columns, beams, girders, other members of FOBs and sheds; including leading all structural elements within 1 Km lead, bolting, riveting or welding as per approved drawing or as directed by Engineer In-charge with two coats of aluminium paint conforming to IS: 2339 on all exposed surface. Rate shall include cost of labour, materials, tools & plants and only pre-fabricated structural elements shall be given by Railway. (Work not requiring traffic or power block)	MT	6020.08
041270	Extra over item no 041260, if the work is to be executed under traffic or power block	MT	1224.37
041280	Cleaning and greasing of free end and fixed end of steel girder Bridge bearing with Grease Graphite, Kerosene oil and other materials as per instruction given in Para 222 of Indian Railway Bridge Manual 1998 with painting of Bearing as per requirement complete as directed by engineer in-charge		
041281	Girder size from 40' to 80'	Each	6917.89
041282	Girder size above 80' & upto 150'	Each	10251.01
041290	Launching & fixing in exact location of all type of steel girders,complete job including lead within five kilometres& lifting to any height as per site requirement, provision of approaches, cleaning/repairs to bed blocks etc.	MT	1892.55

Item No.	Description Of Item	Unit	Rate (Rs)
041300	Delaunching & shifting steel girders to desired location, complete job including lead within five kilometres, all ascends, descends as per site requirement, provision of approaches etc.	MT	1227.71
041310	Dismantling of BG / MG girder into individual components, duly breaking / cutting rivets / bolts etc. and depositing released materials in Railway's store, as directed by Engineer in-charge complete job with contractor's labour, tools, plant, leads, lifts, consumables etc.	MT	4692.00

CHAPTER - 5 : Bridge Works- Misc.				
Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
051010	Providing and laying boulders apron on river bed for protection against scour with stone boulders weighing not less than 35 kg each with voids filled with spalls complete as per drawing and Technical Specification	Cum	1617.20	
051020	Laying of boulder apron laid in wire crates of approved size including overlaps at joints, laid with stone boulders, all loose ends to be tied with 4mm galvanised steel wire. Payment for boulders & wire crates to be done extra	Cum	695.88	
051030	Supplying Galvanized Wire Net Trungers made from 4mm galvanised steel wire @ 32 kg/10sqm having minimum tensile strength of 300 Mpa conforming to IS:280 and galvanizing coating conforming to IS:4826, woven into mesh with double twist, mesh size not exceeding 100mm x 100mm	Sqm	332.07	
051040	Providing and laying of Apron with cement concrete blocks cast in-situ and made with nominal mix of 1:2:4 with a minimum cement content of 250 kg/cum {Note : (1) Payment to be made for blocks only; (2) Cement and shuttering to be paid extra}	Cum	3133.22	3.2
051050	Providing and laying Pitching with Stone Boulders, weighing not less than 35kg each with voids filled with spalls on slopes, laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical Specifications (filter media to be paid separately under the relevant item)	Cum	1835.45	
051060	Providing and laying Pitching with Stone Boulders, weighing not less than 35kg each with voids filled with cement sand mortar 1:4 on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical Specifications (filter media to be paid separately under the relevant item)	Cum	3167.22	1.25
051070	Providing and laying Filter Material as per RDSO Specifications underneath pitching in slopes complete as per drawing and Technical Specification	Cum	1846.55	
051080	Providing & laying of a Permeable Geo-textile Filter between pitching and embankment slopes on which pitching is laid to prevent escape of embankment material through voids of stone pitching/cement concrete blocks as well as to allow free movement of water without creating any uplift head on pitching, as per RDSO Guidelines -			
051081	With GJT-Type 1 (for harsh conditions)	Sqm	45.92	
051082	With GJT-Type 2 (for less severe conditions)	Sqm	52.94	
051083	With GJT-Type 3 (for moderate conditions)	Sqm	67.56	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
051090	Laying Boulder Apron on river bed for protection against scour with stone boulders supplied by Railway with voids filled with spalls complete as per drawings and Technical Specifications, with maximum lead upto 150m	Cum	833.38	
051100	Laying Pitching with Stone Boulders supplied by Railway with voids filled with spalls on slopes, laid over prepared filter media including boulder apron laid dry in front of toe of embankment as per drawings and technical specifications with maximum lead upto 150m (filter media to be paid under relevant item)	Cum	338.72	
051110	Insertion or removal of Railway's Steel Cribs (CC Cribs) of nominal size 0.6m x 0.6m x 1.8m with hard wood packing for temporary arrangements / scaffolding including handling from and to stacks at nominated locations at site with all labour, tools, plant, machinery, lead upto 250m and all lift etc., complete and as directed by Engineer in-charge	Each	236.85	
051120	Stenciling of Girders with yellow background and black / blue lettering with ready mix paint w.r.t. executed inspection, greasing and painting/writing date on girder bridge, as directed by Engineer in-charge	Each	31.19	
051130	Cleaning Surface of Abutment and Piers upto bed level under water with brush or any other tools to remove all traces of moss, loose materials, fungus, algae, vegetational growth etc. Cleaning shall be carried out with contractor's trained staff, tools & plants, safety equipments etc. complete job including arranging safe approach	Sqm	97.38	
051140	Inspecting Sub-structure and Foundation in and around piers & abutments, using trained and qualified staff, under-water cameras, monitoring sensors & safety equipments, recording observed defects, e.g. cracks, cavities, bulging, leaning spalling and other defects noticed in the structure on video cassettes & photographs and submitting detailed inspection report to Engineer in-charge. Payment shall be made on hourly basis of videography & photography	Hour	963.46	
	Flooring in Bridges			
052010	Providing and laying flooring with rubble stone, laid over 15cm thick CC 1:2:4 and the voids filled with CC 1:2:4 complete with the joints pointed with 1:2 Cement Sand mortar as per drawing and Technical specifications. Payment for cement to be done separately. Voids in the rubble stone to be taken as 35% of the gross volume of the stone layer. (Base concrete to be paid extra)	Cum	2254.97	1.12 for rubble stone only

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
052020	Providing and laying 300mm thick (average) Dry Stone flooring with boulders of not less than 35kg each in weight, hand packed with surface levelled off to the correct section with hammer dressing as necessary on the ground including filling the gaps with quarry spalls and ordinary sand complete including cost of supply of all materials, labour, lead, lift, tools, plants, crossing of tracks and the like as per drawing and technical specification as directed by Engineer in charge	Cum	1746.41	
052030	Supply and laying of quarry dust including consolidation, supply of all materials, labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer in charge in case loose slush is encountered at site of foundation before casting the foundation or before laying the filtering media (payment based on stack measurement).	Cum	1604.15	
052040	Supply and laying of coarse sand including consolidation, supply of all materials, labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer in charge in case loose slush is encountered at site of foundation before casting the foundation or before laying the filtering media (payment based on stack measurement)	Cum	2730.80	
052050	Guniting concrete surface with cement mortar of average thickness 25mm, applied with compressor after cleaning surface and spraying with epoxy complete as per Technical Specification in the ratio of 16kg of cement to 0.04cum of sand, 50mm x 50mmx3mm size wire mesh, with 0.67kg of epoxy and 0.64kg of accelerator compound for guniting per sqm	Sqm	1030.27	0.16
052060	Providing and inserting nipples of size 12 to 20 mm dia. with approved fixing compound after drilling holes for grouting as per Technical Specifications including subsequent cutting/removal and sealing of the hole as necessary after completion of grouting	Each	56.18	
052070	Sealing of cracks/porous concrete by injection process through nipples/grouting complete as per Technical Specification			
052071	Neat Cement Grout with 20% anti shrinkage compound w.r.t. cement	Kg	257.48	as per actual site consumption
052072	Cement Sand Mortar (1:1) Grout with 20% anti-shrinkage compound w.r.t. cement	Kg	356.87	as per actual site consumption
052073	Epoxy Grout	Kg	1031.27	
052080	Patching of damaged concrete surface with Pre-packed polymer concrete with average thickness of 25mm.Curing compounds, initiator and promoter, available in the formulations, to be applied as per instructions of manufacturer and as approved by the Engineer in charge.	Sqm	476.31	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
052090	Applying epoxy mortar over leached, honey combed and spalled concrete surface and exposed steel reinforcement complete as per Technical Specification with average thickness of 10mm including priming coat, mortar plaster and seal coat of epoxy	Sqm	1094.22	
052100	Removal of defective concrete, cleaning the surface thoroughly, applying the shotcrete mixture mechanically with compressed air, comprising of cement, sand, coarse aggregates, water and quick setting compound as approved, gunite strength not less than 25 Mpa with average thickness of 40mm in the ratio of 16 kg of cement to 0.04cum of sand, 50mmX50mmX3mm size wire mesh with 0.67 kg of epoxy and 0.64 kg of accelerator compound for guniting per sqm	Sqm	1111.58	0.16
052110	Applying pre-packed cement based polymer mortar of strength 45 Mpa (28 days) for replacement of spalled concrete with average thickness of 10mm	Sqm	400.34	
052120	Providing & applying epoxy for bonding of new concrete to old concrete @ 0.80 kg/sqm with pot life not less than 60-90 minutes and as per specifications including cleaning the surface	Sqm	660.84	
052130	Providing & fixing 12 mm rabbit wire mesh at the junction of RCC where specifically ordered or as shown in the drawing	Sqm	113.07	
052140	Providing, cutting, fabricating, treating, fixing structural steel as per IS:2062 in access ladders (top of girder/slab to pier cap), inserts, platforms, railing, trolley refuges, drain pipes etc. by drilling holes and grouting with C.C. as per specifications including painting with two coats of approved paint over two coats of primer. (cement for grouting shall be paid separately)	MT	117181.70	
052150	Providing / fixing / grouting various size HTS holding down bolt in concrete column or in other structural steel member including drilling holes of required size, bolts threaded at both ends shall be fixed with proper size nuts bolts, plates, washers complete including all labour and material	Kg	170.87	0.01
052160	Providing weep holes by making suitable opening or drilling in existing Brick Masonry / Plain / Reinforced Concrete abutment, wing wall/return wall with 100 mm dia. AC pipe, extending through the full width of the structure complete and repairing the same with cement mortar 1:2 (1 cement : 2 coarse sand)	Metre	367.37	0.02
052170	Providing and fixing of Drainage Spouts of 100mm UPVC complete with cement mortar 1:2 (1 cement : 2 coarse sand)	Metre	4776.13	0.01

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
052180	Providing and laying of filter media consisting of granular materials of GW, GP, SW groups as per IS:1498 (latest) in required profile behind boulder filling of abutments, wing walls / return walls etc. above bed level with all labour and material complete job as per drawing and technical specification of RDSO Guidelines	Cum	2201.50	
052190	Removing all loose concrete, cleaning rust with dusting compound & water jet, drying, replacing worn out reinforcements by welding new reinforcement for making up lost steel section, applying approved anti-corrosive polymer coating over the damaged area to proper profile, providing polymer mortar (upto 20mm thickness) or polymer concrete (more than 20mm thickness) consisting of cement, sand, 6mm down chips where required and polymer as per manufacturers' specification. The rate includes curing for 14 days, all materials, consumables, labours, tools and plants, scaffolding/staging with all lead and lift. Cost of cement & inforcement to be paid separately.			
052191	20mm thick polymer mortar	Sqm	1474.86	0.122
052192	20mm-50mm thick polymer concrete	Sqm	1093.04	
052200	Supply, fabrication and erection of steel members to replace existing corroded members of built up section made up of MS plate, angles, channels of different thickness and sizes including painting with one coat of ready mix paint Zinc Chromate priming to IS:104 followed by one coat of ready mix paint red-oxide Zinc Chrome priming paint to IS:2074. Structural steel should conform to IS:2062-Gr.'B'. Fabrication and erection to be as per existing design initially by bolts and nuts and finally by rivetting during the sanctioned traffic block. Payment for rivets and riveting to be made separately. Rate includes cutting of new steel work, drilling for riveting, dismantling of any existing members required for inserting fabricated members, fixing of new fabricated built up members with all tools, plants, labour, consumables, machinery and accessories etc. Work will be executed as per IRS:B 1-2001.	MT	161547.21	
052210	Supplying and changing of corroded worn-out and loose rivets of any size at any location of the bridges with or without traffic blocks including all tools, plants, machinery complete in all respects.			
052211	For Rivets of size upto 25mm dia.	Each	235.16	
052212	For Rivets of size more than 25mm dia.	Each	383.04	
052220	Dismantling of existing bed plate from existing bed block by cutting & removal of HD bolts and nuts with all tools, plants, machinery scaffolding, labour and other materials and shfiting it at one end of the bridge during traffic block.	Each Plate	9187.95	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
052230	Painting the HFL and danger level marks, year of HFL on bridge abutments and piers with ready mixed paint as per standard in two coats over one coat of primer with all materials, labour, tools, scaffolding, all lead and lift etc. including writing complete	Each Mark	215.92	
052240	Providing cast in situ bridge number plaques as per Railway drawing in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm notch in Bridge parapet coping duly engraving the letter and figures and an arrow indicating the direction of flow and finishing the top exposed surface with cement mortar 1:3, painting letters and figures with two coats of black enamel paint on two coats of white background with all labour, tools, cement, paint etc. with all leads and lifts	Each	638.83	0.1
052250	Providing cast in-situ plaques for bridge foundations details of size 45cmx45cmx5cm in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm deep notch over abutment & piers, engraving the letters & figures with CM 1:3 and finished smooth including painting letters and figures with 2 coats of black enamel and plaque with white enamel with all labour, tools, cement, paint, curing etc. as a complete job	Each	829.66	0.1
052260	Providing & laying non pressure NP-4 Class RCC pipe with collars, jointing with 1:2 cement and ordinary sand mortar including testing of joints, but excluding earthwork with all labour and material as a complete job. Cement for mortar will be paid separately.			
052261	300mm dia.	Metre	1600.52	
052262	450mm dia.	Metre	1879.01	
052263	600mm dia.	Metre	2212.52	
052264	900mm dia.	Metre	2992.67	
052265	1000mm dia.	Metre	3565.69	
052266	1200mm dia.	Metre	5503.12	
052267	1800mm dia.	Metre	8391.09	
052270	Supplying, spreading and filling coarse sand (no cohesive materials to be used) of approved quality including watering and ramming in foundation, plinth, behind the abutment, wing wall, retaining wall in layers not exceeding 150mm thick including its compaction as per direction of Engineer-in-charge. The rate includes all lead, lift, ascent, descent, crossing of Railway line etc. complete with contractor's labour, materials, tools and plant.	Cum	2544.84	
052280	Providing Boulder Backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra.	Cum	394.44	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
052290	Dewatering of natural or accumulated water from any location. Payment to be done for Horse power of pump multiplied by pumping hours.	HP Hour	35.23	
052300	Supplying & fixing Galvanised Steel Wire Ropenet, made of 9mm dia. steel wire rope having aperture size of 45cm x 60cm with 6m long hangs for top anchoring and 5m wide alongwith chain-link mesh-netting of 80mm x 80mm mesh size made from 2.4mm dia galvanised wire, joining of chain-link mesh & steel wire ropenet and joining of adjacent nets with galvanised spiral lock springs of steel wire dia 2.2mm; inner dia. of springs 18mm; total length 50mm ± 0.5mm; pitch 4mm & open end length 60mm including cutting of tree/shrub etc. in rope-netting location and also, excavation / filling-back of trenches in all types of soil after anchoring ropenet with RCC pre-cast beam of size 15cm x 15cm x 2m of M-15 concrete & 30cm thick M-10 PCC. This work also includes supply of 200mm x 200mm x 6mm epoxy coated washer plates with 12.5mm / 18mm dia. hole at centre and supplying & fixing of anchor bolts/fastners of 10mm dia. including drilling of holes upto a depth of 110mm in rock; cleaning of holes; fixing of fastners with nut & epoxy coated washer plates; applying torque 65 to 70 N/mm for fixing of ropenet for intermediate anchoring on the surface of cutting, bottom anchoring upto 1m depth by using 16mm dia. HYS D steel bolts, threaded upto 200mm on top and fixing epoxy coated washer plate, fabrication & fixing of U-pin on top of cutting for top anchoring and joining of adjacent nets with spiral spring and fixing at the ratio of 1 no. per 0.6m in longitudinal direction of net portion and additional locks for lacing chain link netting with ropenet with contractor's materials, machinery, tools & plants, cement, steel, labour, lead, lift, transportation, ascent, descent, taxes, royalty etc. complete as per directions of engineer-in-charge.	Sqm	1077.57	
052310	Supplying & fixing of Erosion Control Geomat (for surfacial erosion control) consisting of 2 layers of polymeric netting, having aperture size of 20mm x 20mm and a middle layer of coir as per Specifications. Max. width of rolls/each composite mat shall be 5m with overall weight of Geomat as 300(+/- 20) gsm. Work includes dressing of slopes to proper profile & removing loose rubbles, muck & leading to the point as directed by engineer in-charge; supply & spreading of good earth/soil material on slope/berm portion etc. to proper profile for laying of Geomat anchoring in top anchor trench; seaming of adjacent panels of Geomat with HDPE Twine; fabrication & fixing of U-pin on slope/berms including top of cutting for anchoring of Geomat as per approved scheme and providing of grass sods and placing over Geomat so as to completely cover it, including watering for 2 weeks with all labour, tools & materials alongwith lead & lift etc. complete	Sqm	240.64	

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
052320	Supplying & placing of Mechanically Woven Double Twisted Hexagonal Shaped Wire Mesh Gabion Boxes of required sizes, Mesh Type 10cm x 12cm, Zn and PVC coated Mesh Wire dia. 2.7/3.7mm (ID/OD), edges of meshes mechanically edged / selvedged with heavy coating of galvanization as per EN 10223-3/ASTM A 975 with partitions at every 1m interval and properly packed with approx. 150mm size boulders including transportation and placing at indicated places as per direction of engineer-in-charge including contractor's tools, plants, labour, royalty charges etc. complete in all respect and stitching with lacing wire of dia. 2.2/3.2mm (ID/OD) @ 5% by weight of Gabion boxes, carrying the material by head lead from nearest approach with all safety precautions and all leads and lifts.	Cum	2742.67	
052330	Supplying & placing partly or fully underwater of Polypropylene Tarred Rope Gabion, fabricated from 9mm dia. rope, 100mm x 100mm Mesh with partitions at every 1m interval and properly packed with approximately 150mm size boulders including transportation and placing at indicated places as per direction of engineer-in-charge with contractor's tools, plants, labour etc. including royalty charges complete in all respect and stitching with polypropylene lacing rope of minimum dia. 4mm; carrying the material by head lead from nearest approach with all safety precautions and all leads and lifts	Cum	2629.91	
	SURFACE PROTECTION OF BRIDGES			
052340	Surface protection of Piers, Substructure, Box bridges and culverts in river bed by cleaning & preparing the surfaces by acid etching; treating surface with a two-layer plaster; first layer of 7mm (5mm in case of sidewalk) thick with cement (OPC or slag) admixed with an octadecanoic acid based cementitious waterproofing compound (Max. bulk density 0.5 gm/cc), in the weight ratio of 50:3 for cement and waterproofing compound and second layer of 12mm thick cement-sand (1:2.5) plaster, enriched with polyester fibre (to be paid separately) and curing the plastered surface. Treatment shall be impermeable under a water head of 20m. (Note : In lieu of etching with acid the surface can be roughened or bond improved by other appropriate means) complete as per specification.			
052341	Piers, substructure, Box bridges and culverts in river bed	Sqm	668.63	0.065
052342	Sidewalks	Sqm	610.93	0.05

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
052350	Surface protection of Underside of Bridge Decks, Girders, Inside of Box Girders, Railings etc. of Bridges and Piers and Substructures which are not in River Bed by cleaning and drying the surface; repairing local defects, e.g. honeycombs with a paste of cement admixed with 5% by weight of cement of Polymer bonding agent, applying (@ 0.30 litre/sqm) a coat (DFT of 100-150 micron) of a translucent brown coloured modified phenolic resin based single component high performance polymeric waterproofing compound (sp. gr. 0.87, rosin content nil and a solid content of minimum 0.47%), applying (@ 0.25 litre/sqm) a top coat of a modified phenolic resin based single component waterproofing compound of grey or other shades (sp. gr. 0.85) before the base coat becomes tack-free; permitting the coatings to cure and dry naturally; the 2-coat system shall be impermeable under a water head of 20m, complete as per specification.	Sqm	382.19	
052360	Surface protection of Bridge Deck by cleaning and preparing the surface by acid etching; treating the surface with a two-layer plaster; first layer of 5mm thick with cement (OPC or slag), admixed with an octadecanoic acid based cementitious waterproofing compound (bulk density not greater than 0.5 gm/cc) in the weight ratio of 50:3 for cement and waterproofing compound, further enriched with specially fabricated deformed galvanized steel fibre @ 150 gm/sqm of treated surface and second layer of 12mm thick cement-sand (1:2.5) plaster, enriched with polyester fibre (to be paid separately) and curing the plastered surface. Treatment shall be impermeable under a water head of 20m complete as per specifications.	Sqm	619.75	0.065
052370	Shotcreting in two layers (each layer of 38mm thickness) with cement concrete mortar 1:1:2 (1 cement : 1 coarse sand : 2 coarse aggregate) mixing epoxy & fixing welded wire mesh 50mm x 50mm x 3mm in between two layers including cost and conveyance of all materials, labour charges, leads, lifts, centering, scaffolding, machine mixing, laying concrete with shotcrete machine etc. complete as per specification and as directed by Engineer in-charge	Sqm	1596.57	0.9

Item No.	Description Of Item	Unit	Rate (Rs.)	Cement Qty. (qtl.)
052380	Fabrication and erection of height gauge / rail type barricades along RUB/ROBs in position using 50R/90R/52Kg rails supplied by Railways at depot, duly excavating pits of size 450mm x 450mm x 600mm for erection of rail posts of required height in correct alignment including loading, transportations, unloading of rails from Store Depot to site of work, embedding in 1:3:6 concrete using 40mm size hard stone aggregate including cutting, drilling of holes in rails and connecting horizontal rails to the vertical posts with bolts and clamps duly applying two coats of approved quality primer as per drawing with contractors materials, as directed by Engineer in-charge	MT	7322.68	0.54
052390	De-launching / removing existing steel girders / PSC slabs including ballast retainers, walk ways etc. of various spans under line block by crane or by any means and placing the same on bridge approaches or at toe of embankment without infringement including cutting holding down bolts with contractor's labour, tools, cranes, plant & machinery, consumables etc. complete and as directed by Engineer in-charge	MT	1910.44	
052400	Designing and developing Detailed Reinforcement Drawings for following items for ROB/RUB/Bridge based on Railway's approved GADs, duly collecting necessary data from Railways and R&B authorities, duly designing members and submission of check plot duly getting proof-checked by Railway approved institutes, submitting for Railway's verification and approval, making corrections duly incorporating suggestions in drawings/designs, further submission of original in transparent film paper and soft copy (CD) for Railways approval etc. with contractor's technical expertise and instruments, labour, consumables, repeatedly attending till final approval etc., complete as directed by Engineer in-charge			
052401	(a) Open / Pile / Well Foundation for RCC columns / piers	Each Set	21197.38	
052402	(b) RCC Bed Block	Each Set	6591.51	
052403	(c) Foundation and sub-structure for RCC retaining wall, abutment and approach slab	Each Set	20616.63	
052404	(d) Steel 'I' Girders with RCC Deck Slab / PSC 'I' / Box Girder / RCC 'T' Beam and Slab	Each Set	84731.43	

CHAPTER - 6 : Rails, Sleepers, Fittings and Renewals			
Item No.	Description of Item	Unit	Rate (Rs.)
	1. Rails :		
061010	Pulling & positioning of rails accurately on cess including supporting rails, providing required gap and squaring at ends for renewal preparation, as directed by Engineer in-charge		
061011	(a) Upto 40 m long rail panel	Running Metre	7.32
061012	(b) More than 40 m long rail panel	Running Metre	11.07
061013	Extra to Item no. 061011 for working on bridge	Running Metre	4.33
061014	Extra to Item no. 061012 for working on bridge	Running Metre	5.62
061020	Removing rail of all types & length from track, laid on any type & density of sleeper by removing fish plates, fastenings & fish bolts and other materials alongwith keeping released rail and all materials safely on cess, as directed by Engineer in-charge. (cutting & drilling of rail shall be paid separately and work to be done under traffic block & Railway's supervision)		
061021	(a) BG Track – For Through Renewal work	Running Metre	18.96
061022	(b) MG Track – For Through Renewal work	Running Metre	14.94
061023	(c) BG Track – For Casual/Scattered Renewal work	Running Metre	25.78
061024	(d) MG Track – For Casual/Scattered Renewal work	Running Metre	21.48
061030	Insertion of rails of all types & length in track, laid on any type & density of sleeper to the specified gauge. Rates include fastening of rail with sleepers with standard set of fastenings and fixing of fish plates and bolts or, if required, providing gap for welding. (drilling and cutting of rail to be paid separately)		
061031	(a) BG Track – For Through Renewal work	Track Metre	40.11
061032	(b) MG Track – For Through Renewal work	Track Metre	31.60
061033	(c) BG Track – For Casual/Scattered Renewal work	Running Metre	28.05
061034	(d) MG Track – For Casual/Scattered Renewal work	Running Metre	23.38
	2. Sleepers :		
061040	Removing from track existing Wooden / Metal sleepers with fittings in running track conditions for TSR (Through Sleeper Renewal) / ISD (Increasing Sleeper Density) works & stacking the same neatly at specified places with contractor's tools & labour, as directed by Engineer in-charge. (For ISD work only identified unserviceable sleepers to be covered)		
061041	For location of work not involving deep screening	Each	95.30
061042	For location of work involving deep screening (deep screening to be paid separately)	Each	80.38

Item No.	Description of Item	Unit	Rate (Rs.)
061050	Inserting in track Metal / Wooden sleeper lying along the cess / formation / slope / toe with all fittings complete for TSR / ISD work to specified gauge with contractor's tools including one packing to make track fit for 20 kmph speed and dressing of ballast, as directed by Engineer in-charge		
061051	For location of work not involving deep screening	Each	162.58
061052	For location of work involving deep screening (deep screening to be paid separately)	Each	135.48
061053	Extra to item no. 061051 and 061052 for sleepers lying on slope / toe of bank beyond initial height of 5 metres	Each	20.70
061060	Re-spacing of existing Metal / Wooden sleepers carefully for Increasing Sleeper Density (ISD) work in track including fixing all fastenings and initial packing, as directed. (Scope also includes pre-marking of sleeper spacing as per required sleeper density)		
061061	For location of work not involving deep screening	Track Metre	94.47
061062	For location of work involving deep screening (deep screening to be paid separately)	Track Metre	69.00
061070	Removing from track the existing PSC sleepers with fittings in running track conditions for TSR / ISD works & stacking the same neatly at specified places with contractor's tools & labour, as directed by Engineer in-charge. (For ISD work only identified unserviceable sleepers to be covered)		
061071	For location of work not involving deep screening	Each	125.59
061072	For location of work involving deep screening (deep screening to be paid separately)	Each	105.65
061080	Inserting in track the PSC sleepers lying along the cess / formation / slope / toe with all fittings complete for TSR / ISD work to specified gauge with contractor's tools including one packing to make track fit for 20 kmph speed and dressing of ballast, as directed by Engineer in-charge		
061081	For location of work not involving deep screening	Each	210.41
061082	For location of work involving deep screening (deep screening to be paid separately)	Each	173.50
061083	Extra to item no. 061081 and 061082 for sleepers lying on slope / toe of bank beyond initial height of 5 metres	Each	51.75
061090	Re-spacing of existing PSC sleepers carefully for Increasing Sleeper Density (ISD) work in track including fixing all fastenings and initial packing, as directed (Scope also includes pre-marking of sleeper spacing as per required sleeper density)		
061091	For location of work not involving deep screening	Track Metre	127.93
061092	For location of work involving deep screening (deep screening to be paid separately)	Track Metre	102.34
061100	Replacement of sleepers in track with sleepers lying on cess for casual renewal at isolated locations with all fittings complete to specified gauge & cross level with contractor's tools including packing and dressing of ballast, as directed by Engineer in-charge. Released materials shall be neatly stacked and handed over.		
061101	(a) BG Track (PSC to PSC sleepers)	Each	380.56
061102	(b) BG Track (Wooden / Metal to PSC sleepers)	Each	314.80
061103	(c) BG Track (Wooden / Metal to Wooden / Metal sleepers)	Each	270.96
061104	(d) MG Track (PSC to PSC sleepers)	Each	232.25
061105	(e) MG Track (Wooden / Metal to PSC sleepers)	Each	203.25

Item No.	Description of Item	Unit	Rate (Rs.)
061106	(f) MG Track (Wooden / Metal to Wooden / Metal sleepers)	Each	186.42
061107	(g) BG Track (Channel to Channel sleepers on Bridges) :		
061108	(i) For Non-Track Circuited area	Each	394.82
061109	(ii) For Track Circuited area	Each	446.57
061110	Replacement of CST-9 plate including carrying serviceable plate and stacking released plate	Each	92.47
	3. Fittings / Lubrication Works :		
061120	Fixing of fish plate and fish bolt (of 4 fish bolts) on a joint created in rail of 90R, 52Kg or 60Kg of all UTS, duly lubricating fish plate/bolts with contractor grease graphite in running track condition including transportation of fish plate and fish bolts from nearest station / store / level crossing. (rail cutting & drilling to be paid separately)	Each	134.14
061121	Extra to Item no. 061120 for using fishplate of 6 bolts	Each	45.84
061130	Through renewal of Metal / GFN liners in running track condition including removing, cleaning & lubrication of ER Clip & Insert Eye and re-driving the same with contractor's grease graphite of approved quality with all lead & lift	Each Sleeper	13.96
061131	Extra to item no. 061130 for lubrication of metal liner and rail foot at liner seat	Each Sleeper	6.03
061140	Through Fitting Renewal (TFR) on PSC track, comprising of renewal of Grooved Rubber Pads, Liners and ERCs (excluding seized ERCs) without damaging PSC sleepers. Scope includes cleaning rail seat on sleeper, ERC and eye of Inserts with wire brushes and applying grease to eye of insert and central leg of ERC with contractor's grease of Railway's specification, cleaning rail flange at liner seats, putting-back liners in correct position & squaring of sleepers and sealing liner edges with grease. [Rate includes lead upto 500m)	Each Sleeper	25.98
061150	Lubrication of Elastic Rail Clips on PSC sleepers with contractor's grease, conforming to Railway's specifications, labour etc. complete as per Para 1411 (5)(b) of IR P.Way Manual	Each	2.75
061160	Recoupment & replacement of missing / wornout fittings of channel sleeper on Bridge with railway's fittings -		
061161	Involving Rubber Pad	Each Sleeper	48.17
061162	Not involving Rubber Pad	Each Sleeper	24.13
	4. Drilling and Cutting Works :		
061170	Cutting / cropping of rail of 90R / 52Kg or lighter section – 72 UTS, manually and perfectly vertical with contractor's labour, hacksaw blade and tools & plants -		
061171	On Cess	Each	201.35
061172	In-situ situation	Each	293.14
061180	Cutting / cropping of rail of 52Kg – 90 UTS, manually and perfectly vertical with contractor's labour, hacksaw blade and tools & plants -		
061181	On Cess	Each	241.62
061182	In-situ situation	Each	366.42
061190	Cutting / cropping of rail of 60Kg – 90 UTS, manually and perfectly vertical with contractor's labour, hacksaw blade and tools & plants -		
061191	On Cess	Each	302.02
061192	In-situ situation	Each	473.23

Item No.	Description of Item	Unit	Rate (Rs.)
061193	Extra to item no. 061191 for cutting 110 UTS rail (30% of relevant item rate)	Each	90.61
061194	Extra to item no. 061192 for cutting 110 UTS rail (30% of relevant item rate)	Each	141.97
061200	Drilling of hole in rail of any section and any UTS, manually with contractor's labours, tools & plants, consumables etc. for -		
061201	(a) Hole of dia. 25mm and above	Each	144.29
061202	(b) Hole of dia. below 25mm	Each	105.34
061203	Chamfering of drilled hole with contractor's tools, plants and chamfering kit, as per RDSO's specifications for all types of rails	Each	12.75
061210	Gas cutting of rail of various sections with contractor's tools & plants, as directed by engineer in-charge :		
061211	(a) Rail section of 90R and below	Each	85.92
061212	(b) Rail section of 52Kg and above	Each	103.11
061220	Fixing of grip expansion bolts of 18mm / 22mm dia. with nuts and MS clips / washers on PSC sleepers as per specifications for fixing guard rails / check rails / trolley path including drilling of required holes in sleepers with all fittings with contractor's tools & plants, equipment, consumables with all lead, lifts etc. complete, as directed by Engineer in-charge, excluding cost of bolts, nuts, washers, clips etc.	Each	89.71
061230	Stacking of glued joints in single layer for electrical testing, in such a manner that glued joints - (a) shall not touch ground, (b) shall not touch one another, (c) shall not touch any rail or any metallic body, (d) shall not be water-logged from any side and (e) end post shall not rest on supports of glued joint	Each	74.67
	5. Laying of Switch Expansion Joints (SEJs) :		
061240	Insertion of IRS Switch Expansion Joint (SEJ) with PSC / Wooden special size sleepers, as per approved drawing including fixing of special size bearing plate, rubber pad and other sleeper / rail fittings. Work includes providing temporary connection till the time welding of SEJ is done. Sleepers shall be given initial packing to make track fit for 20 kmph speed.	Set	6476.80
061250	Insertion of improved SEJ with PSC / Wooden special size sleepers as per approved drawing including fixing of special size bearing plate, rubber pad and other sleeper / rail fittings. Work includes providing temporary connection till the time welding of SEJ is done. Sleepers shall be given initial packing to make track fit for 20 kmph speed.	Set	8882.20
061260	Renewal of existing SEJ (in running line & yard) on PSC / Woodensleepers with cutting of rails, as required and lubrication, gauging & aligning rails, providing temporary connection with adequate welding gap with adjoining rail and ensuring proper track geometry for 30 kmph speed, as directed by Engineer in-charge.	Set	4769.05

CHAPTER - 7 : Turnouts And Renewal			
Item No.	Description Of Item	Unit	Rate (Rs)
1. Assembling Works :			
071010	Assembling complete MG turnout etc. on staging or on formation / ballast bed to correct gauge and alignment as per standard drawing, duly leading all types of special size sleepers, switches, crossings, fittings, fastenings etc. with maximum lead of 250m & all lift and testing points with S&T staff for throw of switch etc. at station yard complete and as directed by Engineer in-Charge.		
071011	(a) 1 in 8½ Turnout	Set	22760.80
071012	(b) 1 in 12 Turnout	Set	26967.50
071013	(c) 1 in 16 Turnout	Set	30239.25
071014	(d) Diamond Crossing	Set	34896.75
071015	(e) Derailing Switch	Set	4631.05
071020	Assembling complete BG Turnout including symmetrical split on staging or on formation / ballast bed to correct gauge and alignment as per standard drawing on all types of rails over PSC sleepers at specified locations, duly leading special size sleepers, switches, crossings, fittings, fastenings etc. with maximum lead of 250m & all lift and testing points with S&T staff for throw of switch etc. at station yard after levelling surface complete and as directed by engineer in-charge		
071021	(a) 1 in 8½ Turnout	Set	41956.60
071022	(b) 1 in 12 Turnout	Set	46096.60
071023	(c) 1 in 16 Turnout	Set	49201.60
071024	(d) 1 in 20 Turnout	Set	56324.70
071025	(e) Diamond crossing	Set	58516.60
071026	(f) Derailing switch	Set	8711.25
2. Dismantling Works :			
071030	Dismantling of existing BG turnouts and trap switches with all types of rails on other than PSC sleeper layout, removing fish plates & fastenings, leveling of ballast to correct profile & stacking all the released materials, sleepers, fastenings, rails, switches & crossings including segregating & stacking at specified locations in a neat & countable manner, as directed by Engineer in-charge :		
Under Traffic Block Conditions -			
071031	(a) 1 in 8½ Turnout	Set	31552.90
071032	(b) 1 in 12 Turnout	Set	36285.26
071033	(c) 1 in 16 Turnout	Set	40839.26
071034	(d) 1 in 20 Turnout	Set	45393.26
071035	(e) Diamond Crossing	Set	47670.26
071036	(f) Derailing Switch	Set	6509.69
Under Conditions not requiring Traffic Block -			
071037	(a) 1 in 8½ Turnout	Set	24549.05
071038	(b) 1 in 12 Turnout	Set	27816.20
071039	(c) 1 in 16 Turnout	Set	30921.20
071040	(d) 1 in 20 Turnout	Set	34026.20
071041	(e) Diamond Crossing	Set	39554.25
071042	(f) Derailing Switch	Set	4884.05

Item No.	Description Of Item	Unit	Rate (Rs)
071043	Extra over Items 071031 to 071035 and 071037 to 071041 for PSC sleeper layout	Set	10948.58
071044	Extra over Items 071036 and 071042 for PSC sleeper layout	Set	2886.79
071050	Removing & stacking all types of rails, crossing & fastenings of existing turnout excluding switch portion during traffic block, laid on any type of sleeper with contractor's labour, tools, plants etc. for -		
071051	(a) 1 in 8½ Turnout	Set	11815.10
071052	(b) 1 in 12 Turnout	Set	15230.60
071053	(c) 1 in 16 Turnout	Set	18646.10
071054	(d) 1 in 20 Turnout	Set	20923.10
071060	Removing existing Wooden / ST sleepers of Turnouts excluding switch portion, collecting all released sleepers, fittings etc. at indicated place with contractor's labour, tools & equipments etc. complete. Work shall be carried out in stages under traffic including supporting and maintaining track as directed by Engineer in-charge for safe passage of trains at 20 kmph speed for -		
071061	(a) 1 in 8½ Turnout	Set	16597.95
071062	(b) 1 in 12 Turnout	Set	20737.95
071063	(c) 1 in 16 Turnout	Set	26027.38
071064	(d) 1 in 20 Turnout	Set	30568.15
071065	(e) Diamond Crossing	Set	33906.60
071066	Extra over Items 071061 to 071065 for PSC sleeper layout	Set	9136.18
071070	Dismantling, removing & dressing the area of existing switch portion on Wooden / ST sleepers including removing rails, sleepers, fastenings etc. during traffic block with all contractor's tools, plants, equipments etc. complete and as directed for -		
071071	(a) 1 in 8½ Turnout	Set	16369.10
071072	(b) 1 in 12 Turnout	Set	18076.85
071073	(c) 1 in 16 Turnout	Set	19784.60
071074	(d) 1 in 20 Turnout	Set	22756.72
071075	(e) Derailing Switch	Set	13019.38
071076	Extra over Items 071071 to 071075 for PSC sleeper layout	Set	5024.90
071080	Dismantling of existing BG / Mixed Gauge Scissor Cross-Over in yard on Wooden / Metal sleepers and leveling of ballast to correct profile, leading sleepers, fittings, rails etc. to nearby place including segregating & stacking the same in a neat & countable manner within the lead of 250m & all lift, clear of infringements, crossing of track, if any complete, as directed. {One set means four sets of 1 in 8½ points & crossings and two sets of each acute & obtuse crossings} :		
071081	Under Traffic Block Conditions	Set	88847.99
071082	Under Conditions not requiring Traffic Block	Set	78998.10
071090	Dismantling of existing MG points and crossings / snag dead ends / trap switches of any rail section on wooden / steel sleepers layout, removing fish plates & fastenings, leveling of ballast to correct profile including segregation & stacking of all released materials at specified location in a countable manner with contractor's vehicles, consumables, stores, labour etc. complete, as directed by engineer in-charge for -		
071091	(a) For 1 in 8½ Turnout	Set	22479.05
071092	(b) For 1 in 12 Turnout	Set	27654.05

Item No.	Description Of Item	Unit	Rate (Rs)
071093	(c) For Snag Dead End	Set	15234.05
071094	(d) For Derailing Switches	Set	4285.48
071095	(e) For Diamond Crossing	Set	51053.10
071096	(f) Extra to Item no. 071091 for working under Traffic Block (15% of relevant item rate)	Set	3371.86
071097	(g) Extra to Item no. 071092 for working under Traffic Block (15% of relevant item rate)	Set	4148.11
071098	(h) Extra to Item no. 071094 for working under Traffic Block (15% of relevant item rate)	Set	642.82
071099	(i) Extra to Item no. 071095 for working under Traffic Block (25% of relevant item rate)	Set	12763.28
3. Insertion & Linking Works :			
071100	Insertion of concrete sleepers in Turnouts in lead and crossing portions (excluding switch portion) as per standard drawing under traffic; carrying out required ballasting with available ballast, packing & supporting track and maintaining track parameters, as directed by engineer in-charge for passing trains safely at 20 kmph speed for -		
071101	(a) 1 in 8½ Turnout	Set	22753.90
071102	(b) 1 in 12 Turnout	Set	27928.90
071103	(c) 1 in 16 Turnout	Set	32068.90
071104	(d) 1 in 20 Turnout	Set	36208.90
071110	Laying 52Kg / 60Kg rails during traffic block on existing PSC Turnout, excluding switch portion, i.e. laying lead & crossing portions including cutting, drilling etc. and fixing all components - lead rails, crossing, check rail etc. alongwith re-spacing of sleepers as per standard drawing and making turnout fit for safe passage of traffic at 20 kmph speed for -		
071111	(a) 1 in 8½ Turnout	Set	19105.30
071112	(b) 1 in 12 Turnout	Set	21560.66
071113	(c) 1 in 16 Turnout	Set	23926.84
071114	(d) 1 in 20 Turnout	Set	26382.21
071120	Assembling & insertion of all types of Switch Assembly on Broad Gauge with 52Kg / 60Kg rails & PSC sleepers on temporary staging, built with railway's sleepers, rails etc. at indicated location including cutting, drilling, fixing of all components, fittings etc. with housing of tongue rails as per requirement of signaling etc. including preparation for operation of traffic block & inserting Switch portion during traffic block by removing all ballast, muck etc. upto required level, attending track parameters including lifting, spreading of deficient ballast from adjoining track, if required, packing etc. complete as directed by engineer in-charge, so as to make track fit for 20 kmph speed for -		
071121	(a) 1 in 8½ Turnouts	Set	26754.75
071122	(b) 1 in 12 Turnouts	Set	30427.05
071123	(c) 1 in 16 Turnouts	Set	31597.45
071124	(d) 1 in 20 Turnouts	Set	35044.30
071125	(f) Derailing Switch	Set	10529.23

Item No.	Description Of Item	Unit	Rate (Rs)
071130	Insertion and linking with track, the already assembled BG PSC turnout by slewing with the help of manual labour or by cranes including crossing of one track in traffic block without any damage to track components including preparing ballast bed and providing one round of kutcha packing of ballast under bottom of sleepers to make track fit for 20 kmph speed to required alignment and longitudinal level, as directed by engineer in-charge for -		
071131	(a) 1 in 8½ Turnout	Set	32434.60
071132	(b) 1 in 12 Turnout	Set	36988.60
071133	(c) 1 in 16 Turnout	Set	41046.72
071134	(d) 1 in 20 Turnout	Set	44643.12
071135	(e) Diamond Crossing	Set	51293.72
071136	(f) Derailing Switch	Set	6608.04
071140	Under Traffic block period - Laying / Insertion of already assembled MG Turnout on staging, available alongside of track manually including approach sleepers & connecting newly laid points & crossing with approach track by making necessary cutting & providing closures / cut rails as required and subsequently renewing approach rails with suitable length of cut rails, as required and fixing joints with fish plates, bolts, nuts etc., providing kutcha packing, levelling, aligning, gauging, ensuring proper housing of switch etc. to allow traffic with all leads, lifts etc. complete and as directed by engineer in-charge		
071141	(a) For 1 in 8½ Points & Crossing	Set	28590.90
071142	(b) For 1 in 12 Points & Crossing	Set	33842.55
071143	(c) For Diamond Crossing	Set	39535.05
071144	(d) For Derailing Switch	Set	5691.87
	4. Lifting Works		
071150	Lifting of points & crossing layouts on all types of sleepers upto 75mm or part thereof including approach and exit sleepers including one round of packing, adjustment to sleeper spacing, tightening of fittings and ramping out on either side at slope not steeper than 1 in 1000 or as directed {Note : Item will be paid only when lifting is 25mm or more}		
071151	(a) For 1 in 8½ Points & Crossing	Set	14187.55
071152	(b) For 1 in 12 Points & Crossing	Set	16257.55
071153	(c) For 1 in 16 Points & Crossing	Set	19937.55
071154	(d) For 1 in 20 Points & Crossing	Set	23042.55
071155	(e) For Diamond Crossing	Set	25112.55
071156	(f) For Derailing Switch	Set	2927.33
071157	(g) Extra over item nos. 071151 to 071156 for additional lift beyond 75mm for every 25mm or part thereof upto 225mm	Per 25mm Lift / Set	2070.00
	5. Casual Renewal Works :		
071160	Casual renewal of sleepers in points and crossing portion of Metal / Wooden layout, including taking out existing sleepers & stacking and inserting new / serviceable sleepers with all fittings including packing under new sleeper for -		
071161	(a) Sleepers upto 3.5m length	Each	367.50
071162	(b) Sleepers of more than 3.5m length	Each	436.50

Item No.	Description Of Item	Unit	Rate (Rs)
071170	Casual renewal of sleepers in points and crossing portion of PSC layout, including taking out existing sleepers & stacking and inserting new / serviceable sleepers with all fittings including packing under new sleeper for -		
071171	(a) Sleepers upto 3.5m length	Each	471.00
071172	(b) Sleepers of more than 3.5m length	Each	557.25
071180	Renewal of CMS Crossing complete with fittings & fastenings including removal of existing crossing and stacking, as directed by engineer in-charge (work also involves replacement of wornout rubber pads, liners and ERC, if required) for -		
071181	(a) 1 in 8½ Turnout	Set	3410.58
071182	(b) 1 in 12 Turnout	Set	3682.27
071183	(c) 1 in 16 Turnout	Set	4255.83
071184	(d) 1 in 20 Turnout	Set	4527.52
071190	Renewal of Tongue rails & Stock rails (straight or curved) complete with fittings & fastenings, ensuring proper housing & changing of stretcher bars, if required; but excluding sleepers. Work also includes drilling of hole, if any required and fixing of fish plates. Released rails shall be stacked at indicated place. {Note : (1) In case when only one tongue & stock rail are replaced, only 50% of the quantity shall be payable. (2) If only one tongue rail is replaced, only 25% of the quantity of switch assembly shall be payable} for -		
071191	(a) 1 in 8½ Switch Assembly	Set	8673.47
071192	(b) 1 in 12 Switch Assembly	Set	10636.42
071193	(c) 1 in 16 Switch Assembly	Set	12123.76
071194	(d) 1 in 20 Switch Assembly	Set	13262.26
071200	Through Fitting Renewal (TFR) on PSC Trunouts, comprising of renewal of Grooved Rubber Pads, Liners and ERCs (excluding seized ERCs) without damaging PSC sleepers. Scope includes cleaning Rail Seat on sleeper, ERC and Eye of Inserts with wire brushes and applying grease to eye of Insert and Central Leg of ERC with contractor's grease of Railway's specification, cleaning rail flange at liner seats, putting back liners in correct position & spacing of sleepers and sealing liner edges with grease {Rate includes lead upto 500m} for -		
071201	(a) 1 in 8½ Turnout	Set	4469.48
071202	(b) 1 in 12 Turnout	Set	6035.97
071203	(c) 1 in 16 Turnout	Set	6783.47
071204	(d) 1 in 20 Turnout	Set	7471.63

CHAPTER - 8 : Manual / Mechanised Screening & Ballast Related Activities			
Item No.	Description of Item	Unit	Rate (Rs)
	1. Deep Screening Works :		
081010	Deep screening of track in terms of Para-238 of Indian Railways Permanent Way Manual in other than PSC sleepers and screening of complete ballast section. It includes opening of ballast, digging down to specified depth below bottom of sleeper to provide formation slope of 1:40 towards drain or any prescribed direction, taking out caked ballast, muck etc. from entire ballast section, putting back clean ballast as per required ballast profile, throwing away screened muck arising out of screening on toe of bank or on cess, if low or on spoil banks above top of cutting (including throwing and leveling, if required beyond minimum 5m from the edge of cutting which are upto 3m deep or alternatively carting it upto 50m for disposing it off beyond cutting or platforms) as per direction of Engineer in-charge, including cutting cess, if required for effective drainage upto a distance of 3.5m from centre line of track on both sides and including one round of kutcha packing with screened ballast including attending to track parameter to make track fit for 20 kmph speed. Necessary wooden blocks shall be brought by the contractor. {Note : Cess cutting beyond 3.5m from centre line of track shall be paid extra as per relevant item for earthwork}		
	For BG Track :		
081011	(a) Depth of 150 mm below bottom of sleeper	Track Metre	233.34
081012	(b) Depth of 200 mm below bottom of sleeper	Track Metre	264.94
081013	(c) Depth of 250 mm below bottom of sleeper	Track Metre	284.44
081014	(d) Depth of 300 mm below bottom of sleeper	Track Metre	311.21
081015	Extra to item no. 081011 for deep screening of Turnout (60% of relevant item rate)	Track Metre	140.00
081016	Extra to item no. 081012 for deep screening of Turnout (60% of relevant item rate)	Track Metre	158.97
081017	Extra to item no. 081013 for deep screening of Turnout (60% of relevant item rate)	Track Metre	170.66
081018	Extra to item no. 081014 for deep screening of Turnout (60% of relevant item rate)	Track Metre	186.72
	For MG Track :		
081019	(a) Depth of 150 mm below bottom of sleeper	Track Metre	164.80
081020	(b) Depth of 200 mm below bottom of sleeper	Track Metre	181.28
081021	Extra to item no. 081019 for deep screening of Turnout (60% of relevant item rate)	Track Metre	98.88
081022	Extra to item no. 081020 for deep screening of Turnout (60% of relevant item rate)	Track Metre	108.77

Item No.	Description of Item	Unit	Rate (Rs)
081030	Deep screening of track in terms of Para-238 of Indian Railways Permanent Way Manual on PSC sleepers and screening of complete ballast section. It includes opening of ballast, digging down to specified depth below bottom of sleeper to provide formation slope of 1:40 towards drain or any prescribed direction, taking out caked ballast, muck etc. from entire ballast section, putting back clean ballast as per required ballast profile, throwing away screened muck arising out of screening on toe of bank or on cess, if low or on spoil banks above top of cutting (including throwing and leveling, if required beyond minimum 5m from the edge of cutting which are upto 3m deep or alternatively carting it upto 50m for disposing it off beyond cutting or platforms) as per direction of Engineer in-charge, including cutting cess, if required for effective drainage upto a distance of 3.5m from centre line of track on both sides and including one round of kutcha packing with screened ballast including attending to track parameters to make track fit for 20 kmph speed. Necessary wooden blocks shall be brought by the contractor. {Note : Cess cutting beyond 3.5m from centre line of track shall be paid extra as per relevant item for earthwork}		
081031	(a) Depth of 150 mm below bottom of sleeper	Track Metre	258.97
081032	(b) Depth of 200 mm below bottom of sleeper	Track Metre	295.32
081033	(c) Depth of 250 mm below bottom of sleeper	Track Metre	321.31
081034	(d) Depth of 300 mm below bottom of sleeper	Track Metre	354.78
081035	Extra to item no. 081031 for deep screening of Turnout (60% of relevant item rate)	Track Metre	155.38
081036	Extra to item no. 081032 for deep screening of Turnout (60% of relevant item rate)	Track Metre	177.19
081037	Extra to item no. 081033 for deep screening of Turnout (60% of relevant item rate)	Track Metre	192.78
081038	Extra to item no. 081034 for deep screening of Turnout (60% of relevant item rate)	Track Metre	212.87
	For MG Track :		
081039	(a) Depth of 200 mm below bottom of sleeper	Track Metre	201.42
081040	(b) Depth of 250 mm below bottom of sleeper	Track Metre	226.60
081041	Extra to item no. 081039 for deep screening of Turnout (60% of relevant item rate)	Track Metre	120.85
081042	Extra to item no. 081040 for deep screening of Turnout (60% of relevant item rate)	Track Metre	135.96
081043	Extra to item nos. from 081011 to 081022 and from 081031 to 081042 for disposal of muck at a distance beyond 50m for every additional lead of 50 metres or part thereof upto 500 metres	Track Metre / 50 metre Lead	4.14
081044	Extra to item nos. from 081011 to 081022 and from 081031 to 081042 for disposal of muck for additional lift of 1 metre or part thereof beyond 3 metre lift in case of disposal of muck from track in cutting	Track Metre / 1 metre Lift	8.63

Item No.	Description of Item	Unit	Rate (Rs)
	2. Spreading of Ballast :		
081050	Running out / Putting of railway's stone ballast from existing stacks available along alignment either on top of cutting or on formation or at toe of bank by head leads or by any other means and spreading to the required profile with contractor's labour, tools & plants, as directed by Engineer in-charge. {Payment shall be made based on ballast stack measurement}		
081051	(a) For lead upto 50m and lift up to 5m	Cum	90.41
081052	(b) Extra to item no. 081051 for each additional lead of 50m or part thereof when total lead exceeds 50m, but upto 250m	Cum / 50m Lead	27.00
081053	(c) Extra to item no. 081051 for each additional lift of 2m or part thereof when total lift exceeds 5m	Cum / 2m Lift	22.42
	3. Lifting, Packing & Boxing Works :		
081060	Lifting and packing for regrading the existing BG track to required height / level in stages not exceeding 75mm or part thereof at a time, providing permissible ramp for the track, insertion of moorum / sand / stone ballast uniformly under the existing track and placing the same to safe approved gradient, gauge, cushion including levelling and one round of through packing to allow train movement at restricted speed of 30 kmph for a specified length with all leads & lifts {Note : Lifting of track shall be done in stages as per procedure laid down in Para 233 of IRPWM to get the proposed final level as per approved working profile, as directed by engineer in-charge} -		
081061	(a) In PSC sleeper track	Track Metre	137.77
081062	(b) In other than PSC sleeper track	Track Metre	111.62
081063	(c) Extra for additional lift over 75mm for every 50mm lift or part thereof upto 275mm for item nos. 081061 and 081062	Track Metre / 50mm Lift	20.70
081070	Lifting and packing for regrading the existing MG track to required height / level in stages not exceeding 75mm or part thereof at a time, providing permissible ramp for the track, insertion of moorum / sand / stone ballast uniformly under the existing track and placing the same to safe approved gradient, gauge, cushion including levelling and one round through packing to allow train movement at restricted speed of 30 kmph for a specified length with all leads & lifts {Note : Lifting of track shall be done in stages as per procedure laid down in Para 233 of IRPWM to get the proposed final level as per approved working profile, as directed by engineer in-charge} -		
081071	(a) In PSC sleeper track	Track Metre	108.14
081072	(b) In other than PSC sleeper track	Track Metre	93.29

Item No.	Description of Item	Unit	Rate (Rs)
081073	(c) Extra for additional lift over 75mm for every 50mm lift or part thereof upto 275mm for item nos. 081071 and 081072	Track Metre / 50mm Lift	15.22
081080	Regrading the existing BG track by lowering upto required depth in stages, not exceeding 75mm in one stage including one round of through packing and making track fit for 30kmph speed at each stage of lowering as per Para 234 of IRPWM and subsequent picking up of sags / slacks and attending to misalignment / cross level defects during train operation, providing required ramp-in and ramp-out for safe passage of trains, including cutting trenches across track at every 30m interval to the required final formation level complete, as directed by engineer in-charge	Track Metre	150.18
081090	Regrading of existing MG track by lowering upto the required depth in stages not exceeding 75mm or part thereof under traffic condition and providing permissible slopes as per IRPWM for the formation, including one round of through packing with beaters & rammers to attain safe approved gradient & gauge to allow train at 30 kmph speed	Track Metre	96.31
081100	Boxing of ballast as per profile mentioned in IR's LWR Manual including cess dressing on both sides of track	Track Metre	22.41
081110	Screening of rejected / old ballast stacks so as to remove all fines smaller than 20mm and neatly stacking at slightly shifted location within lead of 50 metre with minor dressing / leveling of ground, as directed by engineer in-charge {measurement shall be on gross quantity}	Cum	236.69
	4. Loading & Unloading of Ballast :		
081120	Leading and loading Railway's ballast, collected at yard / depot / mid-section into Railway's BOB / BKH / any other type of open wagon, using JCB or any other approved mechanised method with all ascents, descents, taxes etc. with lead of 250m & all lifts complete as per specifications and as directed by Engineer in-charge	Cum	22.77
081130	Leading and loading Railway's Ballast collected at yard / depot / mid-section into Railway's covered wagon, using any approved method with all ascents, descents, taxes etc. with lead of 250m & all lifts complete, as per specifications and as directed by Engineer in-charge	Cum	110.91
081140	Leading and loading Railway's Sand collected at yard / depot / mid-section into Railway's covered wagon, using any approved method with all ascents, descents, taxes etc. with lead of 250m & all lifts complete, as per specifications and as directed by Engineer in-charge	Cum	110.50

Item No.	Description of Item	Unit	Rate (Rs)
081150	Unloading of ballast from Railway's Hopper Wagons and distributing the unloaded ballast uniformly over the track {it also includes taking out jammed ballast}	Cum	61.74
081160	Unloading of Ballast from Railway's wagons other than Hopper wagons by opening the doors of boxes and pulling & pushing down ballast with rake irons / phowrahs and distributing unloaded ballast uniformly over the track {it also includes taking out jammed ballast}	Cum	98.12
081170	Unloading of sand / query dust from Railway's wagons other than Hopper wagons by opening the doors of boxes and pulling & pushing down sand with rake irons / phowrahs and distributing unloaded sand uniformly over the track {it also includes taking out jammed sand}	Cum	87.46
081180	Spreading of unloaded sand / query dust from the Railway's wagons on top of cess uniformly in between sleepers, i.e. in crib portion & on shoulders and clearing sand on foot of rails manually under traffic condition complete and as directed by Engineer in-charge	Cum	82.20

CHAPTER - 9 : Welding Activities			
Item No.	Description of Item	Unit	Rate (Rs)
	1. Alumino Thermic Welding Works :		
091010	Supplying Alumino Thermic (SKV) welding portions from RDSO approved sources as per latest RDSO specifications for 25mm gap welding of rail joints including all related consumables, e.g. pre-fabricated dry mould, luting sand, closing pin, asbestos powder, igniter, thimble, magnesite powder etc. -		
091011	(a) For 60 Kg Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	1536.40
091012	(b) For 52 Kg - 90 UTS Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	1283.40
091013	(c) For 52 Kg - 72 UTS Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	1168.40
091014	(d) For 52 Kg - 72 UTS Rail, 2-piece Mould and Air Petrol heating technique	Each	1168.40
091015	(e) For 90R Rail, 2-piece Mould and Air Petrol heating technique	Each	1041.90
091016	(f) For 75R Rail, 2-piece Mould and Air Petrol heating technique	Each	915.40
091020	25mm gap 'in-situ' welding and finishing of rail joints as per IR's AT Welding Manual with RDSO approved welding portion and competent welder, labour, tools, equipments complete during traffic block {Item also includes painting & marking of welded joint, as directed} -		
091021	(a) For 60 Kg Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	4112.64
091022	(b) For 52 Kg - 90 UTS Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	3707.08
091023	(c) For 52 Kg - 72 UTS Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	3236.71
091024	(d) For 52 Kg - 72 UTS Rail, 2-piece Mould and Air Petrol heating technique	Each	3169.28
091025	(e) For 90R Rail, 2-piece Mould and Air Petrol heating technique	Each	2842.00
091026	(f) For 75R Rail, 2-piece Mould and Air Petrol heating technique	Each	2513.56
091030	25mm gap 'in-situ' welding and finishing of rail joints as per IR's AT Welding Manual under traffic block with Railway's welding portion under Railway's supervision by contractor's competent welder and other skilled labour, including consumables tools & equipments. Item includes trimming & grinding by machines. Only welding portion and related consumables, e.g. pre-fabricated dry mould, luting sand, closing pin, asbestos powder, igniter, thimble and magnesite powder will be supplied by Railways. All other tools, equipments etc. including fuel for pre-heating will be arranged by contractor. Item also includes painting & marking of welded joint, as directed by engineer in-charge :		
091031	(a) For 60 Kg Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	2120.27
091032	(b) For 52 Kg - 90 UTS Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	1993.01
091033	(c) For 52 Kg - 72 UTS Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	1691.31
091034	(d) For 52 Kg - 72 UTS Rail, 2-piece Mould and Air Petrol heating technique	Each	1465.86
091035	(e) For 90R Rail, 2-piece Mould and Air Petrol heating technique	Each	1465.86

Item No.	Description of Item	Unit	Rate (Rs)
091036	(f) For 75R Rail, 2-piece Mould and Air Petrol heating technique	Each	1305.48
091040	25mm gap Cess Welding and finishing of rail joints as per IR's AT Welding Manual with RDSO approved welding portion and competent welder, labour, tools, equipments complete. Item also includes painting & marking of welded joint, as directed by engineer in-charge :		
091041	(a) For 60 Kg Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	2744.25
091042	(b) For 52 Kg - 90 UTS Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	2410.40
091043	(c) For 52 Kg - 72 UTS Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	2209.25
091044	(d) For 52 Kg - 72 UTS Rail, 2-piece Mould and Air Petrol heating technique	Each	2190.46
091045	(e) For 90R Rail, 2-piece Mould and Air Petrol heating technique	Each	2021.03
091046	(f) For 75R Rail, 2-piece Mould and Air Petrol heating technique	Each	1873.53
091050	25mm gap Cess Welding and finishing of rail joints as per IR's AT Welding Manual with Railway's welding portion under Railway's supervision by contractor's competent welder and other skilled labour including consumables, tools & equipments. Item includes trimming & grinding by machines. Only welding portion and related consumables, e.g. pre-fabricated dry mould, luting sand, closing pin, asbestos powder, igniter, thimble and magnesite powder will be supplied by Railways. All other tools, equipments etc. including fuel for pre-heating will be arranged by contractor. Item also includes painting & marking of welded joint, as directed by engineer in-charge :		
091051	(a) For 60 Kg Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	1057.20
091052	(b) For 52 Kg - 90 UTS Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	976.35
091053	(c) For 52 Kg - 72 UTS Rail, 3-piece Mould and Compressed Air Petrol heating technique	Each	961.82
091054	(d) For 52 Kg - 72 UTS Rail, 2-piece Mould and Air Petrol heating technique	Each	892.88
091055	(e) For 90R Rail, 2-piece Mould and Air Petrol heating technique	Each	847.93
091056	(f) For 75R Rail, 2-piece Mould and Air Petrol heating technique	Each	795.80
091060	75mm gap 'in-situ' welding and finishing of rail joints as per IR's AT Welding Manual with RDSO approved welding portion and competent welder, labour, tools, equipments complete during traffic block. Item also includes painting & marking of welded joint, as directed by engineer in-charge for -		
091061	(a) 52 Kg 90 UTS rail	Each	6839.14
091062	(b) 60 Kg 90 UTS rail	Each	7782.52
091070	Welding and finishing of rail joints connecting rail sections of 60kg on one end and 52kg on other end as per IR's AT Welding Manual by 50mm wide gap with contractor's RDSO approved welding portion and competent welder, labour, tools, equipments and all materials (Note : Item also includes painting & marking of welded joint, as directed by engineer in-charge) for -		
091071	(a) On Cess condition	Each	3701.99
091072	(b) In-situ condition under traffic block	Each	4813.48
	2. Flash Butt Welding Works :		

Item No.	Description of Item	Unit	Rate (Rs)
091080	Flash Butt Welding of 90 UTS rails, conforming to IR's Manual for Flash Butt Welding of Rail, using contractor's self-propelled rail cum road / Mobile FBW Plants, tools, equipments and consumables. Item also includes painting and marking of welded joints, pre-straightening & post-straightening of panels, as directed by engineer in-charge for -		
091081	(a) 52 Kg on Cess	Each	2575.02
091082	(b) 60 Kg on Cess	Each	2942.88
091083	(c) 52 Kg 'in-situ' under traffic block	Each	3601.16
091084	(d) 60 Kg 'in-situ' under traffic block	Each	4322.40

CHAPTER - 10 : Reconditioning of Points & Crossings			
Item No.	Description of Item	Unit	Rate (Rs)
	1. Built-Up Crossing :		
101010	In-situ re-conditioning of worn out 1:8½ built-up / fabricated crossing on all types of rail sections under traffic by RDSO approved agency, as prescribed in 'IR's Reconditioning of Points & Crossings Manual' with RDSO approved electrodes and suppliers, finishing & grinding within permissible tolerance limit, as directed by engineer in-charge. {Note : One obtuse crossing shall be considered equivalent to two nos. of 1:8½ crossing for payment} :		
101011	(a) Using H3 electrodes	Each	3221.15
101012	(b) Using H3A electrodes	Each	3911.15
101013	(c) Using H3B electrodes	Each	4601.15
101014	(d) Using H3C electrodes	Each	5291.15
101020	In-situ reconditioning of worn out 1:12 or flatter built-up / fabricated crossing on all types of rail sections under traffic condition by RDSO approved agency, as prescribed in 'IR's Reconditioning of Points & Crossings Manual' with RDSO approved electrodes and suppliers, finishing & grinding within permissible tolerance limit, as directed by engineer in-charge :		
101021	(a) Using H3 electrodes	Each	3508.65
101022	(b) Using H3A electrodes	Each	4371.15
101023	(c) Using H3B electrodes	Each	5233.65
101024	(d) Using H3C electrodes	Each	6096.15
	2. CMS Crossing :		
101030	Reconditioning of worn-out 1:8½ CMS (Cast Manganese Steel) crossing on all types of rail sections on Cess or Depot by RDSO approved agency, as prescribed in 'IR's Reconditioning of Points & Crossings Manual' with RDSO approved electrodes and suppliers, finishing & grinding within permissible tolerance limit, as directed by engineer in-charge. {Note : One obtuse crossing shall be considered equivalent to two nos. of 1:8½ crossing for payment} :		
101031	(a) Using H3 electrodes	Each	3508.65
101032	(b) Using H3A electrodes	Each	4371.15
101033	(c) Using H3B electrodes	Each	5233.65
101034	(d) Using H3C electrodes	Each	6096.15
101040	Reconditioning of worn out 1:12 or flatter CMS (Cast Manganese Steel) crossing on all types of rail sections on Cess or Depot, as prescribed in 'IR's Reconditioning of Points & Crossings Manual' with RDSO approved electrodes and suppliers, finishing & grinding within permissible tolerance limit, as directed by engineer in-charge :		
101041	(a) Using H3 electrodes	Each	3967.88
101042	(b) Using H3A electrodes	Each	5002.88
101043	(c) Using H3B electrodes	Each	6037.88
101044	(d) Using H3C electrodes	Each	7072.88

Item No.	Description of Item	Unit	Rate (Rs)
101050	Reconditioning of worn-out all types of CMS (Cast Manganese Steel) crossings on all types of rail sections 'in-situ' under traffic conditions using RDSO approved Translantic Robotic Welding technology alongwith approved agency, finishing & grinding within permissible tolerance limit, as directed by engineer in-charge. {Note : (1) One obtuse crossing shall be considered equivalent to two nos. of crossing for payment. (2) Reconditioned crossing shall give a service life of minimum 80 GMT. In case of premature reconditioning, it shall be done by the contractor free of cost} :	Each	26475.30
	3. Switches / Tongue Rails :		
101060	In-situ reconditioning of worn out 1:8½ tongue rail (only one tongue rail alongwith connected stock rail) of all rail sections under traffic, as prescribed in 'IR's Reconditioning of Points & Crossings Manual' with RDSO approved electrodes and suppliers, finishing & grinding within permissible tolerance limit, as directed by engineer in-charge		
101061	(a) Using H3 electrodes	Each	1035.29
101062	(b) Using H3A electrodes	Each	1345.79
101063	(c) Using H3B electrodes	Each	1656.29
101064	(d) Using H3C electrodes	Each	1966.79
101070	In-situ reconditioning of worn out 1:12 or flatter tongue rail (only one tongue rail alongwith connected stock rail) of all rail sections under traffic, as prescribed in 'IR's Reconditioning of Points & Crossings Manual' with RDSO approved electrodes and suppliers, finishing & grinding within permissible tolerance limit, as directed by engineer in-charge :		
101071	(a) Using H3 electrodes	Each	1315.98
101072	(b) Using H3A electrodes	Each	1695.48
101073	(c) Using H3B electrodes	Each	2074.98
101074	(d) Using H3C electrodes	Each	2454.48
101080	Reconditioning of worn out 1:8½ tongue rail (only one tongue rail alongwith connected stock rail) of all rail sections on Cess or Depot, as prescribed in 'IR's Reconditioning of Points & Crossings Manual' with RDSO approved electrodes and suppliers, finishing & grinding within permissible tolerance limit, as directed by engineer in-charge :		
101081	(a) Using H3 electrodes	Each	884.71
101082	(b) Using H3A electrodes	Each	1160.71
101083	(c) Using H3B electrodes	Each	1436.71
101084	(d) Using H3C electrodes	Each	1712.71
101090	Reconditioning of worn out 1:12 or flatter tongue rail (only one tongue rail alongwith connected stock rail) of all rail sections on Cess or Depot, as prescribed in 'IR's Reconditioning of Points & Crossings Manual' with RDSO approved electrodes and suppliers, finishing & grinding within permissible tolerance limit, as directed by engineer in-charge :		
101091	(a) Using H3 electrodes	Each	1002.88
101092	(b) Using H3A electrodes	Each	1313.38
101093	(c) Using H3B electrodes	Each	1623.88
101094	(d) Using H3C electrodes	Each	1934.38
	4. SEJ (Switch Expansion Joint), Weld And Rail :		

Item No.	Description of Item	Unit	Rate (Rs)
101100	Re-conditioning of worn out all types of SEJs of all rail sections to the standard profile as per RDSO drawing and prescribed in 'IR's Reconditioning of Points & Crossings Manual' including grinding etc. complete. {Note : Two stock rails + Two tongue rails will constitute one set of SEJ} :		
101101	(a) On Cess condition	Set	4687.69
101102	(b) In-situ under traffic condition	Set	5474.50
101110	Re-conditioning of cupped welded joints 'in-situ' under traffic conditions as per RDSO's guidelines for 'IR's Reconditioning Of Scabs, Wheel Burns Of Rail And Cupped AT Welded Joint'	Each	282.33
101120	Re-conditioning of Wheel Burns / Scabs on rail under in-situ and traffic conditions as per RDSO's guidelines for 'Reconditioning Of Scabs, Wheel Burns Of Rail And Cupped AT Welded Joint'	Sq cm	8.47

CHAPTER - 11 : Formation & Rehabilitation			
Item No.	Description of Item	Unit	Rate (Rs)
	1. Earth-Work :		
111010	Removing existing ballast neatly from shoulder, crib and below sleepers so as to completely expose formation top for formation treatment / repairs and running out the same after completion of formation treatment work including dressing as per IRPWM standard profile	Track Metre	359.66
111020	Insertion & spreading of blanketing material, conforming to RDSO's specifications, uniformly under the existing BG track in layers of maximum 75mm thickness at a time upto the proposed formation level as per approved drawing by duly lifting the existing track in stages under the running conditions, consolidating every layer of blanketing material manually or mechanically in stages from stacks collected on either side of track and packing the track for safe running of trains at speed of 30 kmph, achieving desired track geometry, as directed by engineer in-charge under - (Note : Supply of blanketing material shall be paid separately)		
111021	(a) Without Traffic Block condition	Cum	1081.19
111022	(b) During Traffic Block condition	Cum	1255.34
111030	Excavation and leading of excavated earth / muck / dismantled rubbish of CC masonry in foundation from platform in-between running / adjacent to track and by manual or any other suitable means or descent/ascend, crossing of single track, obstruction of track, signal wires, OHE wires, passenger crowds or any other obstructions etc.	Cum	993.89
111040	Dressing and levelling the formation top surface in cutting or embankment, removing vegetation / shrubs / any debris, duly making good the isolated undulations etc. of upto 300mm depth with Railway's blanketing material, disposal of surplus soil on slopes by spreading uniformly, rolling formation top in between or adjacent to running track with 10MT roller for 5 to 8 passes including watering while rolling to obtain uniform desired formation top, as directed by engineer in-charge	Sqm	41.55
	2. Soil Testing :		
111050	Slope stability calculation for Railways Embankment / Cutting more than 6 meters height based on soil materials & parameters as per RDSO's latest standards and specifications, duly conducting relevant lab test, e.g. cohesion and angle of internal friction etc. and submitting report for approval duly showing the cross-section dimensions for embankment / cutting :		
111051	(a) Embankment	Each Job	415.38
111052	(b) Cutting	Each Job	496.00
	3. Miscellaneous Works :		

Item No.	Description of Item	Unit	Rate (Rs)
111060	Excavation in all types of soil for formation treatment below track under speed restriction of 20 kmph upto specified depth & width including making up the cess as per standard profile or spreading earth on bank, if the same is not required for cess making and leveling the excavated bed to slope of 1 in 40 towards cess. The rate also includes working during traffic block for excavation, removal and insertion of Railway's Aluminum Alloy Girders or Rail Clusters on C.C. crib for making temporary arrangement alongwith erection and removal of cribs, all wooden packing required and loading, unloading, shifting operations including carriage of girders etc. complete and maintaining the track parameters, as directed by engineer in-charge		
111061	(a) With Railway's Aluminum Alloy Girders	Cum	2832.82
111062	(b) With Rail Clusters, fabricated by contractor with rails supplied by Railways	Cum	3534.16
111070	Spreading blanketing material from stacks by the side of track and filling the same in 15cm thick layer in track, levelling, watering, ramming with hand rammers upto the formation top during formation treatment in running traffic condition at speed restriction of 20 kmph	Cum	1149.14
111071	(a) Extra to item no. 111070 for every 50 metres lead or part thereof when the lead exceeds the initial 250 metres	Cum / 50 metre Lead	51.75
111072	(b) Extra to item no. 111070, for every 1 metres height / lift or part thereof, when the lift exceeds initial 5 metres	Cum / 1 metre Lift	86.25
111080	Earthwork for repairing to cess by cutting or raising of existing cess upto 4 metre from centre of track with Railway's earth including cutting of earth, leading, benching, filling, dressing including cutting of grass / shrubs / trees etc.; watering, compaction by ramming and leveling of earth for required longitudinal & cross-sectional profile, as directed	Running Metre	83.61
111090	Formation treatment with Biaxial Geogrid 30 kN/m (Polyester/ Polypropylene) alongwith deep screening of ballast by BCM, which includes manufacture, testing, supply of Geogrid which should be made from virgin high density polypropylene of weight 320 gms/sqm with required UTS and aperture sizes of 35mm x 35mm or 45mm x 45mm or 55mm x 55mm square or (30mm to 40mm) x (60mm to 65mm) or (40mm to 50mm) x (60mm to 65mm) rectangular (as approved by engineer in-charge), by making suitable arrangement to BCM for spreading Geo-grid beneath sleepers during deep screening with all contractor's men, material, transportation, crossing of track & cutting of roll to required length for enabling to lay alongwith BCM and as directed by Engineer in-charge at site	Sqm	246.85
111100	Earth-work in embankment with contractor's own earth including royalty / taxes, excavation / loading into contractor's vehicle other than black cotton soil for repairing of cess / formation / level crossing, rain cuts etc. to make surface to the desired level and slope to entire satisfaction of Engineer in-charge. Rate shall include sectioning to profile, all lift, descends, ascends, crossing of track / road / nallah etc. including breaking of clods etc. and compaction by rollers / rammers / tamping rods etc.	Cum	250.13

Item No.	Description of Item	Unit	Rate (Rs)
111110	Excavation for widening of existing formation in cuttings in hard soils which require picks or crow bars for hacking including soils containing stones or boulders of size under 0.03 cum without infringing the nearby track, as directed by engineer-in-charge at site including cutting of earth, loading, leading by contractor's vehicles, unloading at site, dumping on spoil bank by head loads and utilising same excavated earth for widening of existing formation in embankment as per standards, duly rolling manually at 2:1 slope and levelling bank to the required profile including watering and compaction with contractor's labour or mechanically operated rollers with all contractor's labour, clearing of jungle, benching etc., tools, plants, vehicles etc. complete with lead upto 1000m and all lifts including crossing of track, wherever necessary	Cum	408.05
111120	Extra over item no. 11100 for earth-work for making cess on other side of the track (when no approaches available along track or no road vehicles to work at site) by dumping contractor's own earth other than black cotton soil, collected along toe of bank of any height on to other side of track & side slope of the existing bank by head load, duly crossing of tracks with all contractor's materials, labour, tools, plant including loading of earth in baskets, lifting, leading to the non-cess side of bank including crossing of tracks & dumping etc. and as directed by the Engineer in-charge	Cum	25.01

CHAPTER - 12 : Activities at Construction Sites			
Item No.	Description of Item	Unit	Rate (Rs)
1. Dismantling Works :			
121010	Dismantling of existing MG track, gas cutting of rails into free rails of length, as directed; removing fish plates & fastenings, levelling of ballast to correct profile, so as to form a level bed for laying BG track including segregation and stacking at specified location in countable manner	Track Metre	103.71
121020	Dismantling existing middle rail of 52Kg / 90R track, serving for MG track in Mixed Gauge track portion and check rail (on inside of curved track) of 52Kg / 90R / 75R rails duly removing fish plates and bolts including removing chairs from sleepers, stacking released rails, fittings & fastenings, as directed by engineer in-charge	Track Metre	98.00
121030	Dismantling & removing existing SEJ (Switch Expansion Joint) assembly during line block and its replacement with plain track as of adjoining section with all fittings and stacking the released materials, as directed and aligning rails, providing temporary connection with adequate welding gap with adjoining rail and ensuring proper track geometry for 30 kmph speed	Set	7686.46
121040	Dismantling of existing rail / metal fencing, fixed adjoining running lines of track, duly excavating and levelling the foundation by hand compaction, removing connections and transporting the released material by suitable means and stacking the same, as directed by engineer in-charge	MT	1255.42
121050	Removing, screening and salvaging ballast from track, duly digging / scarifying ballast by beaters / wire brushes, leveling formation after salvaging ballast, separating muck by screening the salvaged ballast with contractor's 20mm size sieve, stacking of sieved ballast for measurement on or outside the formation along track, disposing off muck at specified locations under non-traffic conditions with all ascents, descents, as directed by Engineer in-charge	Cum	390.79
121060	Dismantling existing sand humps in yards including brick / stone masonry on either sides of track, removing sand and earth to the required level including clearing site and stacking released materials clear of infringement, complete and as directed for -		
121061	(a) Broad Gauge	Each	6942.55
121062	(b) Metre Gauge	Each	5907.55
2. Barricading Works :			
121070	Provision of barricading with contractor's bamboos / balli vertical post of 75 to 100mm dia. planted at every 2m interval, projecting at least 1.5m above ground level and driven firmly (minimum 0.5m) inside ground and including painting verticals & horizontals with red luminous paints / strips at alternative bay on barricade. Barricades shall be completely removed when no longer required by engineer in-charge. (60% payment shall be made on provision of barricading at work-site)		
121071	(a) With 3 horizontal bamboo / balli members of minimum 50mm dia. spaced equally	Running Metre	128.77
121072	(b) Joining with strong nylon rope in one cross and one horizontal pattern of minimum 5mm dia.	Running Metre	81.39

Item No.	Description of Item	Unit	Rate (Rs)
121080	Providing Rail Barricading with rails supplied by Railways with verticals provided at every 1.5m interval, height of barricade being upto 1.5m above ground / termination level and one row of horizontal rail, duly cutting rails and drilling holes as required, assembling necessary accessories to required length, including earthwork excavation for foundation, fixing posts in cement concrete base of size 0.45m x 0.45m x 0.60m and one coat of red oxide painting of steel work (excavation and concrete work will be paid separately)	MT	1310.31
	3. Shifting & Pairing Works :		
121090	Shifting & pairing of rails / panels unloaded alongside existing running track to adjoining formation including crossing of track, duly lifting & pushing rail / panel without damaging it and taking all necessary precautions, so as not to infringe the running track, as directed by Engineer in-charge (crossing of first track shall also be paid)		
121091	(a) For rails upto 13m length	Running Metre / Track crossing	27.80
121092	(b) For rails/panels of more than 13m and upto 40m length	Running Metre / Track crossing	33.49
121093	(c) For rails/panels of more than 40m length	Running Metre / Track crossing	42.15
	4. Laying & Linking Works :		
121100	Providing Centre Line / Rail Level Pegs on formation at an interval of 30 metres on one side or at centre of proposed / existing track, as directed by engineer in-charge for linking of new track / CTR / Deep Screening / Lifting / Lowering works, duly embedding in formation including marking with contractor's paint (rails & tie bar pegs of suitable size will be supplied by Railways)		
121101	(a) With Rail pegs	Each	104.04
121102	(b) With Tie bar pegs	Each	68.67
121103	(c) With contractor's hard wood pegs	Each	94.58
121110	Installation of reference points for track centre line in main and loop lines, in straight or curve portion, SRJ for turnouts, heel of crossing (HOC), locations of derailing switches, switch expansion joints etc. away from formation on firm ground at known offset with 12mm dia MS rod pegs, protected by surrounding concrete of size 15cm x 15cm x 15cm of nominal mix 1:3:6, as directed	Each	74.69
121120	Compaction of ballast in layer, laid on new formation at all the locations with smooth wheeled power roller of 8-10 tonne capacity to sufficient number of passes to form consolidated ballast bed of 100mm - 150mm thickness to a width of 3.5m to 4.5m symmetrical to centre line of proposed track, to suit finished formation to correct line & level with all ascents & descents, as directed by Engineer in-charge. {Note : (1) Rate is inclusive of (a) providing ramp for taking roller to formation and removing the same & making good formation after completion of work; (b) redistribution & leveling of excess ballast while rolling to obtain uniform plane cambered surface; (2) 1.6 times to linear length of turnout shall be paid for work on turnout}	Track Metre	29.42

Item No.	Description of Item	Unit	Rate (Rs)
121130	Linking of BG track on prepared formation to correct gauge & alignment with Railway's track materials including spreading sleepers at specified spacing, squaring, pairing & fixing rails to sleepers with all types of rail fittings & fastenings including their lubrication as per IRPWM standards. Rate is inclusive of kutcha packing to make track fit for 20 kmph speed :		
121131	(a) For sleeper density of 1660 sleepers per km	Track Metre	216.63
121132	(b) For sleeper density of 1540 sleepers per km	Track Metre	201.34
121140	Laying of BG new IRS SEJ (Switch Expansion Joint) on PSC / Wooden sleepers with cutting of rails, as required and lubrication including gauging, aligning rails, providing temporary connection with adequate welding gap with adjoining rail and ensuring proper track geometry for 30 kmph speed	Set	5372.80
121150	Linking of BG track on prepared formation at Level Crossing locations with fixing of level crossing blocks, plate screws, check rails, drilling of holes, as necessary to correct gauge & alignment with Railway's track materials including spreading sleepers at specified spacing, squaring, pairing & fixing rails to sleepers with all types of rail fittings & fastenings including their lubrication as per IRPWM standards. Rate is inclusive of kutcha packing to make track fit for 20 kmph speed and also for anti-corrosive painting of rails.	Track Metre	570.92
121160	Manual linking of BG track over bridges & its approaches with rails / rail panels of any length and guard rails including leading of Wooden / PSC sleepers and rails from stacks available alongside the alignment to site of work with fixing of all fittings, aligning & levelling correctly to make track fit for normal sectional speed :		
121161	(a) With other than PSC Sleeper	Track Metre	340.08
121162	(b) With PSC Sleeper	Track Metre	419.78
121170	Carrying out cut & connection to the existing PSC sleeper track under line block to connect the same to newly linked track which is laid by the side, duly carrying out cutting of rails, insertion of additional PSC sleepers, if required, providing fish plated joints including drilling of holes, slewing required length of both tracks to prescribed alignment, adjusting sleeper spacing, providing continuity to track, spreading of ballast to provide cushion, shoulder ballast to the track stretch, giving one round of packing to make track fit for 20 kmph speed	Each Cut Point	50068.70
121180	Shifting / Slewing the existing or newly assembled track under line block to correct locations & alignment and attending to one round kutcha packing during line block or non-block period, as directed by Engineer in-charge		
	(i) PSC Sleepers -		
121181	(a) Maximum Shifting / Slewing upto 1 metre	Track Metre	227.59
121182	(b) Maximum Shifting / Slewing for more than 1 metre & upto 2 metres	Track Metre	286.15
	(ii) Other than PSC Sleepers -		
121183	(a) Maximum Shifting / Slewing upto 1 metre	Track Metre	201.71
121184	(b) Maximum Shifting / Slewing for more than 1 metre & upto 2 metres	Track Metre	243.11

Item No.	Description of Item	Unit	Rate (Rs)
121190	Linking of Mixed Gauge track on prepared formation to correct gauge & alignment with Railway's track materials including spreading sleepers at specified spacing, squaring, pairing & fixing rails to sleepers with all types of rail fittings & fastenings including their lubrication as per IRPWM standards. Rate is inclusive of kutcha packing to make track fit for 20 kmph speed :		
121191	(a) For sleeper density of 1660 sleepers per km	Track Metre	349.92
121192	(b) For sleeper density of 1540 sleepers per km	Track Metre	324.05
121200	Linking of Metre Gauge track on prepared formation to correct gauge & alignment with Railway's track materials including spreading sleepers at specified spacing, squaring, pairing & fixing rails to sleepers with all types of rail fittings & fastenings including their lubrication as per IRPWM standards. Rate is inclusive of kutcha packing to make track fit for 20 kmph speed :		
121201	(a) For sleeper density of 1340 sleepers per km	Track Metre	171.75
121202	(b) For sleeper density of 1540 sleepers per km	Track Metre	190.83
121210	Manual linking of Metre Gauge track over bridges & its approaches with rails / rail panels of any length alongwith guard rails including leading of Wooden / PSC sleepers and rails from stacks available alongside the alignment to site of work with fixing of all fittings, aligning & levelling correctly to make track fit for normal sectional speed :		
121211	(a) With other than PSC Sleeper	Track Metre	290.28
121212	(b) With PSC Sleeper	Track Metre	354.04
121220	Assembling, laying and linking of Broad Gauge track over Inspection Pit, CC apron, RCC/CC Bed Blocks etc. to correct level & alignment, fixing of all fittings with rails / panels, aligning & leveling correctly, as directed by engineer in-charge {Rate is inclusive of cutting rails, drilling holes for fixing fish plates, fixing reference pillars, lubrication of fittings & fastenings, as required}	Track Metre	163.09
121230	Extra over item 121220 when ACB Plates are also required to be fixed	Track Metre	40.91
121240	Fixing all types of free rails / rail panels over pit line for BG track with inserts, elastic rail clips, MS liners and grooved rubber pads below rail to correct spacing, gauge, alignment and level with above fittings & fastenings in position, duly providing full complements of rail fittings. Required nos. of inserts per bearing shall be fixed at the time of concreting bed block over pit wall to correct spacing, centre to centre, alignment & levels as per IR's approved drawing.	Track Metre	118.96
	5. Miscellaneous Works :		
121250	Construction of Sanded Dead End as per RDSO's Drawing no. RT-347 (with all amendments) with brick-work using country bricks or CC bricks in mud mortar and filling with river coarse sand, surrounding rails and filling around (Brick work & earth work will be paid separately)	Each	9663.45
121260	Working of the Railway Push Trolley by arranging required semi-skilled manpower as per Railway's rules and stipulations for conducting inspections by Railway officials and as directed by Engineer in-charge :		
121261	(a) For Full day	Each	2379.35
121262	(b) For Half day (upto 6 hours)	Each	1198.30

Item No.	Description of Item	Unit	Rate (Rs)
121270	Providing Caution Watchman at a rate of one caution watchman per 8 hours shift with prescribed protection equipments from contractor at location where caution order is imposed; (Detonators, Banner Flags / HS Flags will be supplied by Railways) watchman to be on continuous vigil and exhibit necessary hand signals to the trains for their passage over caution spot :		
121271	(a) For One Shift	Each	538.20
121272	(b) For Half Shift (upto 6 hours)	Each	269.10
121280	Preparation & submission of completion drawings of yard, showing all the details, such as circulating area, approach road, platform shelter, platform, FOB etc. with computer, showing relevant particulars to appropriate scale as per IR's Engineering Code on approved quality, transparent media as per details supplied by Railways, including submission of check print for proof checking, duly incorporating the suggested corrections and modifications and supplying the final plot on approved quality & transparent media with six copies of ammonia prints complete and soft copy, as directed by Engineer in-charge {Note : (i) Drawings shall be prepared by using latest drawing making softwares (AutoCad, Work station etc.) and printing shall be done on high end latest plotters. (ii) Stage Payment - (a) For check print - 40% (b) For Paper tracing - 40% (c) For Ammonia print & soft copy -		
121281	(a) Completion drawing of yard at junction station	Each	14392.25
121282	(b) Completion drawing of building	Each	17853.75
121283	(c) Completion drawing of land plan	Kilometer	7469.25
121284	(d) Completion drawing of way side station	Each	4598.85

CHAPTER - 13 : Maintenance Activities			
Item No.	Description of Item	Unit	Rate (Rs)
	1. Through Packing Works :		
131010	Through packing of track, as described in Para-224 of Indian Railways Permanent Way Manual -		
	(a) For PSC sleeper Track (BG) :		
131011	(i) For Sleeper Density of 1540 Sleepers/Km or more	Track Metre	81.45
131012	(ii) For Sleeper Density of less than 1540 Sleepers/Km	Track Metre	70.59
	(b) For other than PSC Sleeper Track (BG) :		
131013	(i) For Sleeper Density of 1540 Sleepers/Km (M+7) or more	Track Metre	66.28
131014	(ii) For Sleeper Density of 1340 Sleepers/Km (M+4)	Track Metre	57.44
	(c) For PSC sleeper Track (MG) :		
131015	(i) For Sleeper Density 1540 Sleepers/Km (M+7) or more	Track Metre	61.09
131016	(ii) For Sleeper Density of 1340 Sleepers/Km (M+4) or less	Track Metre	52.94
	(d) For other than PSC Sleeper Track (MG) :		
131017	(i) For Sleeper Density of (M+7)	Track Metre	46.39
131018	(ii) For Sleeper Density of (M+4) or less	Track Metre	39.68
131020	Picking up of slacks in track, as directed by Engineer in-charge without damaging sleepers & fittings, duly opening up ballast, gauging, alignment, correcting longitudinal & cross levels, packing, boxing of ballast and dressing the same under traffic conditions (as per Indian Railways Permanent Way Manual Para-229) :		
131021	(a) For PSC Sleeper (BG)	Track Metre	69.82
131022	(b) For other than PSC Sleeper (BG)	Track Metre	60.76
131023	(c) For PSC Sleeper (MG)	Track Metre	61.09
131024	(d) For other than PSC Sleeper (MG)	Track Metre	46.81
131030	First or Second Through Packing of track for all sleeper density including giving a general lift, as desired to eliminate sag after deep screening work, as described in Para-238 of Indian Railways Permanent Way Manual {Notes : (1) Rate is for track laid to 1540 sleepers/km density; (2) 10% extra to the rate shall be paid in case of 1660 sleepers/km density; (3) Only 80% of the rate shall be paid in case of 1340 sleepers/km density} -		
131031	(a) For PSC Sleeper Track (BG)	Track Metre	97.74
131032	(b) For other than PSC Sleeper Track (BG)	Track Metre	81.01
131033	(c) For PSC Sleeper Track (MG)	Track Metre	69.82
131034	(d) For other than PSC Sleeper Track (MG)	Track Metre	57.99
131040	Third or subsequent Through Packing of track for all sleeper density including picking of slacks, as required after second through packing, subsequent to deep screening work, as described in Para-238 of Indian Railways Permanent Way Manual {Notes : (1) Rate is for track laid to 1540 sleepers/km density; (2) 10% extra to the rate shall be paid in case of 1660 sleepers/km density; (3) Only 80% of the rate shall be paid in case of 1340 sleepers/km density} -		
131041	(a) For PSC Sleeper Track (BG)	Track Metre	75.19
131042	(b) For other than PSC Sleeper Track (BG)	Track Metre	64.81
131043	(c) For PSC Sleeper Track (MG)	Track Metre	57.49
131044	(d) For other than PSC Sleeper Track (MG)	Track Metre	48.84

Item No.	Description of Item	Unit	Rate (Rs)
131050	Through packing of Mixed Gauge track, as described in Para-224 of Indian Railways Permanent Way Manual {Notes : (1) Rate is for track laid to 1540 sleepers/km density; (2) 10% extra to the rate shall be paid in case of 1660 sleepers/km density; (3) Only 80% of the rate shall be paid in case of 1340 sleepers/km density} -		
131051	(a) For PSC Sleeper Track	Track Metre	88.68
131052	(b) For other than PSC Sleeper Track	Track Metre	74.78
131060	First or Second Through Packing of Mixed Gauge Track for all sleeper density including giving a general lift, as directed to eliminate sag after deep screening work, as described in Para-238 of Indian Railways Permanent Way Manual {Notes : (1) Rate is for track laid to 1540 sleepers/km density; (2) 10% extra to the rate shall be paid in case of 1660 sleepers/km density; (3) Only 80% of the rate shall be paid in case of 1340 sleepers/km density} -		
131061	(a) For PSC Sleeper Track	Track Metre	108.60
131062	(b) For other than PSC Sleeper Track	Track Metre	88.37
131070	Third or subsequent Through Packing of Mixed Gauge Track for all sleeper density including picking of slacks, as required after second through packing, subsequent to deep screening work, as described in Para-238 of Indian Railways Permanent Way Manual {Notes : (1) Rate is for track laid to 1540 sleepers/km density; (2) 10% extra to the rate shall be paid in case of 1660 sleepers/km density; (3) Only 80% of the rate shall be paid in case of 1340 sleepers/km density} -		
131071	(a) For PSC Sleeper Track	Track Metre	81.45
131072	(b) For other than PSC Sleeper Track	Track Metre	69.44
131080	First and second through packing of points and crossing including gauging, fittings recouplement, elimination of sag and to the required alignment as per provisions of Indian Railways Permanent Way Manual -		
131081	(a) For 1 in 8½ PSC layout	Per Set	14994.85
131082	(b) For 1 in 8½ other than PSC layout	Per Set	13900.05
131083	(c) For 1 in 12 PSC layout	Per Set	20463.10
131084	(d) For 1 in 12 other than PSC layout	Per Set	18327.55
131085	(e) For 1 in 16 PSC layout	Per Set	25188.45
131086	(f) For 1 in 8½ Derailing Switch	Per Set	3961.18
131087	(g) For 1 in 12 Derailing Switch	Per Set	4996.18
131090	Third or subsequent through packing of points and crossing including gauging, fittings recouplement, elimination of sag and to the required alignment as per provisions of Indian Railways Permanent Way Manual -		
131091	(a) For 1 in 8½ PSC layout	Per Set	13108.28
131092	(b) For 1 in 8½ other than PSC layout	Per Set	12006.58
131093	(c) For 1 in 12 PSC layout	Per Set	16228.23
131094	(d) For 1 in 12 other than PSC layout	Per Set	15111.58
131095	(e) For 1 in 16 PSC layout	Per Set	19976.65
131096	(f) For 1 in 8½ Derailing Switch	Per Set	3703.58
131097	(g) For 1 in 12 Derailing Switch	Per Set	4738.58
	2. Systematic Overhauling Works :		

Item No.	Description of Item	Unit	Rate (Rs)
131100	Improving track drainage by Shallow Screening of existing ballast under traffic as per Para 227 {2 (a) to (f)} of IRPWM and Para 6.2-IV of LWR Manual, including removing the crib ballast in 75mm to 100mm depth below bottom of sleeper and complete shoulder ballast without breaking core under the bottom of sleeper, to recover clean ballast by screening on wire mesh and disposing off the muck including throwing & leveling, if required beyond minimum 5m from the edge of cutting which are upto 3m deep or alternatively carting it upto 50m for disposing it off beyond cutting or platforms away from the track, as directed by Engineer in-charge including cutting & making up the cess and ensuring proper drainage slope and then re-inserting cleaned ballast into track and compaction of shoulder and crib ballast by wooden mallet and dressing / profiling ballast as per railway specifications		
	(a) For PSC sleeper Track (BG) :		
131101	(i) For Sleeper Density of 1540 sleepers/Km or more	Track Metre	181.18
131102	(ii) For Sleeper Density less than 1540 sleepers/Km	Track Metre	146.02
	(b) For other than PSC sleeper Track (BG) :		
131103	(i) For Sleeper Density of 1540 sleepers/Km or more (M+7)	Track Metre	163.51
131104	(ii) For Sleeper Density of 1340 sleepers/Km (M+4)	Track Metre	133.63
	(c) For PSC sleeper Track (MG) :		
131105	(i) For Sleeper Density of 1540 sleepers/Km or more (M+7)	Track Metre	149.77
131106	(ii) For Sleeper Density of 1340 sleepers/Km (M+4) or less	Track Metre	127.17
	(d) For other than PSC sleeper Track (MG) :		
131107	(i) For Sleeper Density of (M+7)	Track Metre	138.77
131108	(ii) For Sleeper Density of (M+4) or less	Track Metre	117.32
131109	Extra over Items 131101 to 131108 for working in yards	Track Metre	34.57
131110	Systematic Overhauling (shallow screening) of fish plated / welded joint track sleepers including 3 approach sleepers on either sides upto 50mm below bottom of sleepers in crib & shoulder, replacing rounded ballast, recouping deficient ballast within 50m lead, replacement of wornout fittings supplied by Railway, as directed as per Para-227 of Indian Railways Permanent Way Manual :		
131111	(a) For Broad Gauge track	Each Joint	1202.67
131112	(b) For Metre Gauge track	Each Joint	901.89
131120	Slack picking of joint sleepers and 3 approach sleepers on either sides with replacement of fittings and giving required lift to make up general track level, as directed :		
131121	(a) For Broad Gauge track	Each Joint	431.14
131122	(b) For Metre Gauge track	Each Joint	308.75
	3. Pulling Back & End Cropping Works :		
131130	Pulling back of rails / panels on running track for creep adjustment or other incidental activities and re-fixing anchors and all other fittings, including squaring and slack picking of displaced sleepers, as directed :		
131131	(a) For rails of 13 metre length	Running Metre	21.09
131132	(b) For rails from 13 metre & upto 40 metre length	Running Metre	23.68
131133	(c) For rails more than 40 metre length	Running Metre	26.27

Item No.	Description of Item	Unit	Rate (Rs)
131140	Pulling of single rail / welded rail panels to create a specified gap under traffic block, including opening of fittings & fastenings and re-fixing them on track after pulling of rail and creating standard gap for welding :		
131141	(a) For Rails more than 13m and upto 40m length	Running Metre	28.71
131142	(b) For Rails more than 40m length	Running Metre	36.64
131150	End cropping & pulling back of rails and adjustment of creep by making joints square including cutting & drilling of rails to permit trains after each line block and closing the gaps, duly providing 6.5 metre cut rails and connecting with fish plates & bolts etc. as prescribed in Indian Railways Permanent Way Manual. {Note : (1) The work will be done under traffic block condition, (2) Welding of rail joints, if required, shall be paid separately}		
131151	(a) For Broad Gauge track	Each Joint	1275.91
131152	(b) For Metre Gauge track	Each Joint	925.06
131160	Providing temporary Buffer Rails of fish plated joints of 3 pairs, measuring 6.5m each, duly removing rails of the existing track including cutting & drilling of rails as required for isolating LWR/CWR on all types of track structure. Work will be done under traffic block condition.	Set	8774.67
	4. Re-Alignment of Curves :		
131170	Slewing and realigning of curves on existing Broad Gauge track under running traffic condition, as directed by Engineer in-charge with contractor labour, tools & plants, as required with general lift upto 25mm including one round of through packing, loosening/tightening of P.Way fittings, if required and other incidental works :		
	(a) Other than PSC Sleeper track -		
131171	(i) Maximum slew upto 50mm	Track Metre	83.96
131172	(ii) Maximum slew more than 50mm and upto 100mm	Track Metre	99.34
131173	(iii) Maximum slew more than 100mm and upto 150mm	Track Metre	110.35
131174	(iv) Maximum slew more than 150mm	Track Metre	123.20
	(b) PSC Sleeper track -		
131175	(i) Maximum slew upto 50mm	Track Metre	101.30
131176	(ii) Maximum slew more than 50mm and upto 100mm	Track Metre	124.44
131177	(iii) Maximum slew more than 100mm and upto 150mm	Track Metre	143.46
131178	(iv) Maximum slew more than 150mm	Track Metre	164.26
131180	Slewing and realigning of curves in existing Metre Gauge track under running traffic conditions, as directed by Engineer in-charge with contractor labour, tools and plants, as required with general lift upto 25mm including one round of through packing, loosening/tightening of P.Way fittings, if required and other incidental works :		
	(a) Other than PSC Sleeper track -		
131181	(i) Maximum slew upto 50mm	Track Metre	60.11
131182	(ii) Maximum slew more than 50mm and upto 100mm	Track Metre	68.77
131183	(iii) Maximum slew more than 100mm and upto 150mm	Track Metre	73.75
131184	(iv) Maximum slew more than 150mm	Track Metre	83.10
	(b) PSC Sleeper track -		
131185	(i) Maximum slew upto 50mm	Track Metre	73.22
131186	(ii) Maximum slew more than 50mm and upto 100mm	Track Metre	83.96
131187	(iii) Maximum slew more than 100mm and upto 150mm	Track Metre	96.28

Item No.	Description of Item	Unit	Rate (Rs)
131188	(iv) Maximum slew more than 150mm	Track Metre	100.25
	5. Destressing Works :		
131190	De-stressing of LWR/CWR with contractor's labours, tools & equipments inclusive of all lead & lift. Activities include cutting of LWR/CWR into convenient panels of specified length, removal of ERCs, liners, greasing of ERCs and liner contact area, lifting rails and keeping them on rollers provided at every 15 sleepers, working out elongation of rail ends depending on prevailing site conditions, pulling rails with the help of Hydraulic Tensor to achieve the desired elongation, cutting rails, as required, removing rollers and placing rail in position, re-fixing ERCs & liners and adjustment of gap at SEJs :		
131191	(a) With Railway's Hydraulic Rail tensor	Track Metre	66.21
131192	(b) With Contractor's Hydraulic Rail tensor	Track Metre	68.31
131193	(c) Without Rail tensor	Track Metre	60.00
131200	Extra for carrying out Through Fitting Renewal (TFR of ERC, GRSP, Liners) alongwith de-stressing	Track Metre	12.58
131210	Extra for works of RR / SR / FR / Destressing for Major/Important bridge, having total opening more than 40 metres	Track Metre	84.93
	6. Renewal and Miscellaneous Works :		
131220	Fixing Joggled Fish Plates with bolt / clamp (supplied by Railway) in running track conditions at welds on rail, as directed by engineer in-charge (drilling of holes in rail will be paid separately) :		
131221	With 2 bolts	Set	103.20
131222	With 4 bolts	Set	137.60
131223	With Clamps	Set	150.54
131230	End cutting & grinding of Railway's Metal / GFN liner and providing the same at joints with contractor's tools & plants, labour, consumable etc. complete as directed :		
131231	(a) GFN Liners	Each	12.25
131232	(b) Metal Liners	Each	25.43
131240	Providing wooden blocks at rail joints duly transporting Railway's released wooden sleepers, cutting into blocks, providing bearing plate with rail screw / dog spikes and doing packing, if required, as directed under traffic conditions	Each Joint	125.03
131250	Removing the existing wooden blocks under each joint, duly removing fittings, transporting and handing over the wooden blocks & fittings	Each Joint	53.99
131260	Maintenance of track on main line & loops, Points & crossings etc. including special attention to section for carrying out various maintenance works listed in Indian Railways P.Way Manual / Bridge Manual / LWR Manual for safe running of goods and passenger trains with contractor's tools / labours etc. complete, as directed by Engineer in-charge. {Note : (1) Contractor shall arrange one gang at any point of time comprising of minimum 20 labours with sufficient experience in P.Way working and one P.Way Supervisor. (2) In case, contractor provides less no. of Labour / Supervisor, payment will be deducted @ 10% of the accepted rate per person}	Per Day	12650.00

Item No.	Description of Item	Unit	Rate (Rs)
131270	Removing extra PSC sleepers, provided at fish plated joints and re-spacing shoulder sleepers to LWR spacing as per IRPWM / LWR Manual, duly removing ballast upto 150mm below bottom of sleepers, packing disturbed sleepers and putting back ballast to normal profile including leading & stacking released sleepers & fittings	Each Joint	719.24
131280	Lubrication of fish plated rail joints under traffic as per Para-241 of Indian Railways Permanent Way Manual with approved lubricant and tools & plants supplied by contractor for all types of rail sections	Each Joint	100.24
131290	Lubrication of ERCs and its liner contact area by removal of ERCs and Metal / GFN liners in rail panel, cleaning of rust / scale of ERC, Metal / GFN liners & SGCI insert by using wire brush, scrapper / sand emery paper etc., supply & provision of anti-corrosive treatment by application of graphite grease, as prescribed by Railway under side of liners & corresponding area of rail foot & SGCI insert with ERCs and re-fixing the same as per Para-1411(5) of Indian Railways Permanent Way Manual.	Per Sleeper	17.95
131300	Scattered replacement of Grooved Rubber Pads on PSC / ST sleepers, as directed by Engineer in-charge	Each Rubber pad	15.57
131310	Removing seized ERC from SGCI inserts of existing track by using suitable approved chemicals and / or heavy duty extractor and re-fixing it with lubrication of insert eye and ERC, as directed by engineer in-charge (due care shall be taken to avoid any damage to the sleeper)	Each ERC	36.70
131320	Lubrication of gauge face of rail on sharp curves, cross overs, points & crossings and turn-in curves with contractor's grease graphite of approved quality	Running Metre	4.06
131330	Adjustment of gaps of joints for providing rail end nylon insulation piece, fixing planned fish plate with insulation materials, fixing bolts with nylon bush tightening the same, packing of joints to required level and alignment on running track. All materials shall be supplied by Railway	Each Joint	672.64
131340	Interchanging gauge face of rails of any section in running track including removal of fittings and re-fixing the same after changing of gauge face, cutting of rails, joining the rails with fish plate & drilling holes, if required as per lengths, as directed by engineer in-charge {cutting of rail & drilling of holes shall be paid separately}	Track Metre	91.56
131350	Removing existing glued joints from running track under traffic condition, duly cutting rails, inserting transported cut rails / glued joints of required length by providing gap for carrying out welding or joining rails with fish plates, duly drilling holes in cut rail and approach rail, if required as directed by engineer in-charge (drilling holes & rail cutting will be paid separately)	Each Joint	3012.14
131360	Fixing of wooden distance pieces for platforms with contractor's labour, tools and plants :		
131361	(a) With Railway's wooden block (by cutting Railway's wooden sleepers into blocks by sawing to size)	Each	155.70
131362	(b) With Contractor's hard wood block	Each	975.57

Item No.	Description of Item	Unit	Rate (Rs)
131370	Casual renewal of tie bars of C.I. Plate sleepers including carrying Tie Bars and stacking released ones including adjustment of gauge & squaring of sleepers and fixing of new cotters after splitting the same where necessary and packing of sleepers	Each	71.78
131380	Conversion of square holes of M.S. bearing plates into round holes of specified diameter with contractor's tools & plants	Each	49.57
131390	Drilling holes of 16mm to 22mm dia. on PSC sleepers including special layout sleepers and fixing the dowels with adhesive of approved quality for fixing check rails & guard rails, as directed by engineer in-charge	Each	204.36
131400	Cleaning & clearing of side drains including disposing of muck beyond Railway boundary as per instructions of Engineer in-charge to keep drains clean and clear in cuttings etc.	Running Metre	25.16
131410	Removal of all types of muck / malba and garbage which includes waste material, animal carcass, cow dung, debris, sweepings etc. from track and dumping / throwing, as directed by engineer in-charge following all rules / regulations of State / Central Govt. and Authorised Bodies :		
131411	(a) In case payment is based on area cleaned	Sqm	32.99
131412	(b) In case of payment on the basis of stack / truck / trolley measurement	Cum	629.11
131420	De-weeding, uprooting of weeds / jungle etc. and dressing including scarifying ballast in entire profile upto toe of ballast on track	Track Metre	29.61
131430	Removing weeds & bushes in ballast section and cess upto 3.5m from centre line of track in section & station yard, as specified by Engineer in-charge including disposal of branches, bushes outside cess/yard	Running Metre	11.10
131440	Trimming of tree branches coming within 4m of centre line of track & those obstructing views of LCs / Signal / Indicator at locations in section & station yard, as specified by Engineer in-charge including disposal of branches, bushes outside cess/yard (Note : Girth of more than 30 cm will only be considered as tree)	Per Tree	127.44
131450	General cess dressing upto 1m width from toe of ballast including scarifying toe ballast and making good the ballast toe line, including vegetation uprooting	Running Metre	17.74
131460	Making kutcha trapezoidal side drain of bottom width as 300mm and depth of 450mm in cutting section by excavation in all types of soil including utilising excavated muck for dressing of cess, slopes etc. in Railway land	Running Metre	177.57
131470	Patrolling during cold / hot weather on track for protecting track with all contractor's labour, tools, plants etc. complete		
131471	(a) For a maximum duration of 8 hrs.	Per Person	555.45
131472	(b) For more than 8 hrs. and upto 12 hrs. duration	Per Person	818.80
131480	Monsoon / Security Patrolling whenever required for protection of track with all contractor's labour, tools and plants etc. complete and as directed by Engineer in-charge and as per IRPWM (for a duration of 12 hours)		
131481	(a) For Day shift	Per Person	555.45
131482	(b) For Night shift	Per Person	690.00
	7. Marking and Painting Works :		

Item No.	Description of Item	Unit	Rate (Rs)
131490	Painting of rail outside track on rail bottom, web, foot and fishing plane as per requirement with one coat of red oxide / zinc chromate primer to IS : 2074 of reputed make including surface preparation, i.e. cleaning with wire brush / sand paper as a complete job	Running Metre	50.44
131500	Painting of rail on running track on rail, web, foot including liner contact area (excluding bottom of foot) and fishing plane as per requirement with one coat of red oxide / zinc chromate primer to IS : 2074 of reputed make including surface preparation, i.e. cleaning with wire brush / sand paper as a complete job	Running Metre	47.15
131510	Anti-corrosive painting of rail outside track on rail bottom, web, foot and fishing plane as per requirement with two coats of bituminous emulsion without mica (IP No. 56192 and RDSO Specification No. IRS-P-30-1996) of reputed make including surface preparation, i.e. cleaning with wire brush / sand paper as a complete job as per Para 250 of Indian Railways Permanent Way Manual	Running Metre	124.97
131520	Anti-corrosive painting of rail on running track on web, foot etc. including liner contact area (excluding bottom of foot) and fishing plane as per requirement with two coats of bituminous emulsion without mica (IP No. 56192 and RDSO Specification No. IRS-P-30-1996) of reputed make including surface preparation, i.e. cleaning with wire brush / sand paper as a complete job as per Para 250 of Indian Railways Permanent Way Manual	Running Metre	107.59
131530	Anti-corrosive painting of welds on track or on cess for all rail sections with high build epoxy paint of reputed manufacturer, conforming to RDSO's Specification no. M&C/PCN/123/2012 on welded area upto 10cm on either side including on the underside of rail foot as per Railway's AT Weld Manual including lettering / numbering, as directed	Each	13.97
131540	Marking, inscribing, painting, writing, bordering etc. on new / old iron surface at various locations of Points & Crossings with details of turn-in / turn-out reference station mark on rail web for one set, duly preparing surface with contractor's wire brush and applying two coats of yellow synthetic enamel paint of approved quality as background and stenciling the details to suitable size, as described for every curve reference station mark / switch / crossing details with black enamel paint of approved quality complete, as directed :		
131541	(a) 1 in 16 Turnout	Set	1556.24
131542	(b) 1 in 12 Turnout	Set	1038.83
131543	(c) 1 in 8½ Turnout	Set	655.50
131544	(d) Derailing Switch	Set	327.75
131550	Painting of P.Way Reference Post, Structures etc. with enamel paint of approved make with different colours & letters, as directed by Engineer in-charge :		
131551	(a) Kilometre & Gradient post	Each	66.93
131552	(b) Hectometre Post	Each	74.98
131553	(c) LWR / SEJ Board	Each	113.97
131554	(d) Level Crossing Boards including Road Sign Boards	Each	128.92
131555	(e) Level Crossing Post	Each	130.02
131556	(f) Curve Post	Each	74.71

Item No.	Description of Item	Unit	Rate (Rs)
131557	(g) Level Crossing Boom including fringe	Metre	122.59
131558	(h) Level Crossing Boom without fringe	Metre	97.87
131559	(i) Curve Board	Each	113.97
131560	(j) Curve details, SE, Versine, Station Nos. etc.	Each	38.78
131570	Painting of Bridge Reference / Boards, Structures etc. along track with enamel paint of approved make with different colours & letters, as directed by Engineer in-charge		
131571	(a) Bridge Board	Each	113.97
131572	(b) Bridge Tablet	Each	33.33
131573	(c) Bridge Height Gauge	Each	2106.23
131574	(d) HFL, FSL & DL on Bridge Pier / Abutment	Each	519.42
131575	(e) Miscellaneous General Boards, Jurisdiction Boards, Structures etc.	Sqm	191.28
131580	Removing existing seized / corroded / broken rail screws in PSC sleepers of points & crossings, duly drilling holes in broken rail screws and removing existing rail screw pieces from the holes alongwith existing dowels and fixing new contractor's dowels (procured from RDSO approved sources) and grouting around dowel with Epoxy materials and refixing new Railway's rail screws duly greasing dowel portion with Railway's grease with all contractor's materials, consumables, tools & plants, labour with all lead, lift, crossing of track etc. complete and as directed by the Engineer in-charge	Each	240.06

CHAPTER - 14 : Testing Of Rails & Other Components			
Item No.	Description	Unit	Rate (Rs)
1. USFD Testing of Rails :			
141010	Ultrasonic testing of single rails, required for fabrication of points and crossings by using double crystal normal probe 4.0 MHz frequency with water / oil couplant. The rails shall be tested by probing from the rail head top, rail head side and web with typical oscillogram pattern for various probe positions as per 'Indian Railways Standard Specification for Ultrasonic Testing of Rails and Welds', as applicable to rails for fabrication of points & crossings. The rates are inclusive of contractor's men, materials & machines complete and as directed.	Each	308.37
141020	Carrying out Through USFD testing of running rails & welds (excluding flange testing) including the full head width portion of SEJ, lead portion of points & crossings of all types of rails using 0° (4 MHz) and 70° (2 MHz) central forward & backward, 70° (2 MHz) gauge face corner forward & backward and 70° (2 MHz) field forward & backward probes by NBC (Need Based Concept) method under traffic conditions as per provisions of IR's "Manual & Specifications for Ultrasonic Testing of Rails and Welds" & related instructions, duly marking defects, submission of daily reports and storing back-up data, as specified & directed. The rates are inclusive of contractor's men, materials & machines complete unless otherwise specified and as directed :		
141021	(a) With Contractor's USFD machine	Track Kilometer	2833.03
141022	(b) With Railway's USFD machine including related T&P and probes	Track Kilometer	2603.03
2. USFD Testing of A.T.Welds :			
141030	Carrying out USFD testing of Alumino Thermic (AT) welds on all types of rails, using 0° (2 MHz) double crystal; 70° (2 MHz) 20mm x 20mm single crystal probe for head & flange testing; 2 nos. 45° (2 MHz) single crystal with tandem rig for testing from rail top to bottom & for half moon testing and 70° (2 MHz) 20mm x 20mm side looking probe by NBC (Need Based Concept) method under traffic conditions as per provisions of IR's "Manual & Specifications for Ultrasonic Testing of Rails and Welds" & related instructions duly marking the defects, submission of daily reports and storing back-up data as specified & directed. The rates are inclusive of contractor's men, materials & machines complete unless otherwise specified and directed :		
(1) With Contractor's USFD machine :			
141031	(a) Track having upto 3 rail panels	Each	99.15
141032	(b) Track having more than 3 rail panels	Each	84.99
(2) With Railways' USFD machine including related T&P and probes :			
141033	(a) Track having upto 3 rail panels	Each	91.48
141034	(b) Track having more than 3 rail panels	Each	78.41
3. USFD Testing of Flash Butt Weld :			

Item No.	Description	Unit	Rate (Rs)
141040	Carrying out USFD testing of Flash Butt (FB) & Gas Pressure (GP) welds on all types of rails using 2 single crystal 45° (2 MHz) for head testing and one single crystal 70° (2 MHz) probe for web & flange testing by NBC (Need Based Concept) method under traffic conditions as per provisions of IR's "Manual & Specifications for Ultrasonic Testing of Rails and Welds" & related instructions, duly marking the defects, submission of daily reports and storing back-up data as specified & directed. The rates are inclusive of contractor's men, materials & machines complete unless otherwise specified and directed :		
	(1) With Contractor's USFD machine :		
141041	(a) Track having upto 3 rail panels	Each	92.35
141042	(b) Track having more than 3 rail panels	Each	80.80
	(2) With Railway's USFD machine including related T&P and probes :		
141043	(a) Track having upto 3 rail panels	Each	85.77
141044	(b) Track having more than 3 rail panels	Each	75.05
	4. USFD Testing of SEJ :		
141050	USFD testing of Switch Expansion Joint (SEJ) by NBC (Need Based Concept) method under traffic conditions as per provisions of "IR's Manual & Specifications for Ultrasonic Testing of Rails and Welds" with latest amendments & related instructions, duly marking the defects, submission of daily reports and storing back-up data, as specified in the special conditions, as applicable to rail testing. The rates are inclusive of contractor's men, materials & machines complete unless otherwise specified and directed :		
141051	(a) With Contractor's USFD machine	Set	622.61
141052	(b) With Railway's USFD machine including related T&P and probes	Set	577.76

CHAPTER - 15 : Heavy Track Machines			
Item. No.	Description	Unit	Rate (Rs)
	1. PQRS Related Works :		
151010	Unloading of mono-block PSC sleepers in PQRS Depot using crane from Railway wagons and stacking them at the end of Assembling Line with all leads & lift. {(1) Unloading to be done within the stipulated time as and when loaded BFRs are received, so as to hand over empty BFRs without demurrage; (2) If unloading is not done within the stipulated time, the demurrage raised by the Railways shall be borne by the Contractor} :		
151011	(a) With Railway's portal crane	Each	3.20
151012	(b) With Contractor's portal crane / mechanical means	Each	4.58
151020	Assembling of 13m / 12.6m long track panels in PQRS Depot by spreading PSC sleepers already unloaded and stacked, to correct spacing as per specified sleeper density per km, using portal crane, placing service rails on them and fixing rails to sleepers with standard fastening properly to get correct gauge with all contractor's labour, tools, plants etc. -		
151021	(a) With Railway's portal crane	Track Metre	19.48
151022	(b) With contractor's portal crane	Track Metre	23.90
151030	Loading pre-assembled panels of PSC sleepers in layers on BFR with portal crane in PQRS Depot, complete in such a manner that it may be dispatched in train formation to mid section, as directed by engineer in-charge :		
151031	(a) With Railway's portal crane	Track Metre	4.24
151032	(b) With contractor's portal crane	Track Metre	8.66
151040	During traffic block with Railway's portal crane : dismantling existing track of all types of rail, sleeper and density; loading released panels on BFRs with portal cranes within stipulated time; levelling disturbed and uneven surface of ballast upto bottom of sleeper, (crib ballast to be pulled out in advance to existing level in case of PSC sleeper track); placing new panels from BFRs by Railway's PQRS portals; linking track with fish plates, bolts & nuts to a neat gauge of 1673mm including pulling back extra ballast towards crib & shoulders (after laying BG track with PSC sleepers) and regulating / boxing with available ballast to allow traffic at restricted speed of 20 kmph, complete with contractor's labour, tools, plants and with all lead & lift involved	Track Metre	62.80
151050	Unloading of released track panels consisting of all types of rails & sleepers from Railway wagon at PQRS Depot, using portal cranes including dismantling of released panels to rails, sleepers & fastenings and stacking them material-wise and classification-wise at nominated locations within the yard limits with all leads, lift and crossing of tracks :		
151051	(a) With Railway's portal crane for PSC sleeper track	Track Metre	33.94
151052	(b) With Railway's portal crane for other than PSC sleeper track	Track Metre	25.45
151053	(c) With contractor's portal crane for PSC sleeper track	Track Metre	39.83
151054	(d) With contractor's portal crane for other than PSC sleeper track	Track Metre	29.88
151060	Mechanical / Manual loading of all types of rails on BFRs in PQRS Depot, as directed by engineer in-charge :		
151061	(a) Mechanised loading with Railway's cranes	Running Metre	7.54
151062	(b) Mechanised loading with contractor's cranes	Running Metre	11.29

Item. No.	Description	Unit	Rate (Rs)
151063	(c) Manual loading by contractor's labours	Running Metre	22.21
151070	PQRS Cranes (One Set Of Two Portals) :		
151071	Assisting the operator and maintenance engineers in their duties of day-to-day machine maintenance for PQRS cranes in Base Depot during maintenance or at site working. The activities include : (1) All gas cutting, welding works & oiling / greasing for machine working & maintenance; (2) Transportation of spares, batteries etc. from site store / BFRs at Base Depot and at site during block / break-down etc.; (3) For unloading / loading machines from / to BFRs and placing on auxiliary track; (4) Assisting in replacement of spares on portal crane; (5) Rendering assistance to machine staff, as directed by machine in-charge {Payment shall be made for the days which have not been pre-notified as off-days}	Per Day / Set	3150.37
151072	Doing various miscellaneous works for proper upkeep of crew rest van / rest room, as directed by the machine in-charge by : (1) Fuelling the machine, duly bringing diesel / hydraulic oil from the stacked drums; (2) Bringing water to the staff rest van or staff rest room, cleaning rest van / rest room, cooking food for Track Machine staff or bringing food from outside {cost of food shall be borne by the staff concerned}	Per Day	1041.90
151073	Guarding and watching the Track machine / group of machines, spare parts, oils, grease etc. during day and night time, at all locations wherever necessary, as instructed by the machine in-charge	Per 8 hr's Shift	516.64
	2. Track Relaying Train (TRT) Related Works :		
151080	Carrying out preparatory works before operation of Track Relaying Train (TRT), such as – (1) Broken corroded sleepers to be removed and fastenings to be loosened; (2) Excess ballast to be removed and crib ballast between consecutive sleepers removed upto bottom of sleepers; (3) Check rails of level crossings falling in the range of work to be removed; (4) In case of CTR, rail panels placed at 1.5m away from existing track centre; (5) All existing longer wooden sleepers or interlaced sleepers of different height to be removed; (6) Cutting of existing rails to 6m piece closure at work site from where Track Relaying Train (TRT) will start working on that day; (7) Removal of Reverse jaw type CST-9 sleeper (T-443), joggled fish plates, OHE bonds & other obstructions etc.	Track Metre	13.85
151090	Loading of PSC sleepers in layers on BRH (special type modified BFR for TRT / PQRS working) by using contractor's Gantry (Crane) in TRT / PQRS Base Depot, placing B29dunnage (wooden beddings / wedges) between sleepers to cover entire layer of sleepers, complete in such a manner that it may be dispatched in train formation		
151091	Mechanised loading with Railway's cranes	Each	4.20
151092	Mechanised loading with Contractor's cranes	Each	5.59

Item. No.	Description	Unit	Rate (Rs)
151100	Welding, checking and strengthening of Rail Bridge (connection from BRH to BRH over which TRT machine gantry runs during block) and dowel pins	Each	87.99
151110	Track Relaying Train (TRT) :		
151111	Assisting the operator and maintenance engineers in their duties of day-to-day machine maintenance for TRT in Base Depot or at site working. The activities include : (1) All gas cutting & welding works and oiling / greasing for machine working & maintenance; (2) Transportation of spares, batteries etc. from site store / BFRs at Base Depot during maintenance and at site during block / break down etc.; (3) Assistance in lowering of guidance sled on old track and vibratory Plough & Compactor; (4) Gripping existing & new rails by lifting and guidance frame; (5) Guidance of alignment, positioning of rubber pads on rail seat; (6) Rendering assistance to machine staff, as directed by machine in-charge. {Payment shall be made for the days which have not been pre-notified as off-days}	Per Day	6897.70
151112	Doing various miscellaneous works for proper upkeep of crew rest van / rest room, as directed by the machine in-charge by : (1) Bringing water from nearby source for cleaning machine; (2) Cleaning machine with water jet or any suitable means; (3) Fuelling machine, duly bringing diesel / hydraulic oil from the stacked drums; (4) Bringing water to staff rest van or staff rest room, cleaning rest van / rest room, cooking food for Track Machine staff or bringing food from outside (cost of food shall be borne by the staff concerned)	Per Day	1557.10
151120	Unloading of released sleepers from BRH (special type modified BFR for TRT working) in Depot by using contractor's Gantry (Crane) and stacking them at nominated locations within the yard limits with all leads & lift	Each	6.83
	3. T-28 Machine Related Works :		
151130	Replacement of Turnout by dismantling the existing one, removing and stacking all released materials, removing ballast and muck by excavating upto required depth, preparation of formation bed, laying of Turnout assembly by Railway's T-28 machine, linking of track with all fittings, filling up of ballast duly screened; packing, adjusting, opening & housing of switch; testing operation of switch assembly and attending track parameters, so as to make track fit for 20 kmph speed including disposing off muck to indicated places upto free lead after the block working etc. complete for -		
151131	(a) 1 in 8½ Turnout	Each	47040.29
151132	(b) 1 in 12 Turnout	Each	54875.70
151133	(c) 1 in 16 Turnout	Each	61394.25
151134	(d) 1 in 20 Turnout	Each	68351.75

Item. No.	Description	Unit	Rate (Rs)
151140	Replacement of switch only of turnout by dismantling existing switch, removing and stacking all released materials, removing ballast and muck by excavating upto required depth, preparation of formation bed, laying of pre-assembled switch by Railway's T-28 machine, linking of track with all fittings, filling ballast duly screened, aligning, packing, adjusting, opening & housing of switch, testing operation of switch assembly and attending track parameters so as to make track fit for 20 kmph speed including disposing off muck to indicated places after the block working etc. complete for -		
151141	(a) 1 in 8½ Switch	Each	18140.10
151142	(b) 1 in 12 Switch	Each	21049.60
151143	(c) 1 in 16 Switch	Each	23583.40
151144	(d) Derailing Switch	Each	11663.30
151150	T-28 Cranes (One Set of Two Portal Cranes) :		
151151	Assisting the operator and maintenance engineers in their duties of day-to-day machine maintenance for Portal Cranes (T-28) in Base Depot or at site working. The activities include : (1) All gas cutting, welding works & oiling / greasing for machine working & maintenance; (2) Transportation of spares, batteries etc. from site store / BFRs at Base Depot during maintenance and at site during block / break down etc.; (3) Unloading dip lorries (4 nos.) from BFRs, placement on track and loading back the same on to BFRs / wagons after work completion; (4) Unloading machines / cranes at required location and loading on to BFR; (5) Placement of Railway's wooden blocks underneath chains in the way of movement of cranes or crossing tracks; (6) Placement of 1m rail pieces underneath the crane wheels for shifting of cranes inwards or outwards from its position; (7) Loading / unloading Railway's wooden blocks into crane or wagon; (8) Assisting in replacement of spares on portal crane; (9) Rendering assistance to machine staff, as directed by machine in-charge. {Payment shall be made for the days which have not been pre-notified as off-days}	Per Day	6325.00
151152	Carrying out various miscellaneous works for proper upkeep of crew rest van / rest room, as directed by the machine in-charge (T-28) for - (1) Fuelling machine duly bringing diesel / hydraulic oil from the drums stacked; (2) Bringing water to staff rest van or staff rest room, cleaning rest van / rest room, cooking food for Track Machine staff or bringing food from outside (cost of food shall be borne by the staff concerned)	Per Day	1041.90
	4. BCM / FRM Machine Related Works :		

Item. No.	Description	Unit	Rate (Rs)
151160	Carrying out preparatory works for operation of Ballast Cleaning Machine (BCM) which includes making trench in track for inserting cutter bar, supporting track on wooden block supplied by Railway, removal of ballast alongwith muck from shoulder which is out of reach of cutter chain and putting the same in cutting width or between rails. Rate includes all miscellaneous works, e.g. opening and re-fixing of joggled fish plates, OHE Bonds, dismantling & removing obstructions etc.	Track Metre	11.75
151170	Opening and re-fixing of joggled fish plates, OHE Bonds, dismantling and removing obstructions etc. required for BCM / FRM or any other track machine, working in -		
151171	(a) Electrified Territory	Per Set	72.19
151172	(b) Non-electrified Territory	Per Set	57.64
151180	Carrying out various works during operation of BCM, like filling up of ballast from available locations (including adjoining tracks), required packing, attending track parameters etc. complete so as to make track fit for 20 kmph speed	Track Metre	58.57
151190	Removal of screened muck discharged by BCM from cuttings, drains, platform etc. (including muck around OHE mast, signal post etc.) and disposing it beyond 5m from edge of cutting which are upto 3m deep or alternatively carting it upto 50m for disposing it off beyond the length of cutting / platform and making up cess wherever low using muck	Running Metre	23.31
151200	Removal of screened muck discharged by FRM / SBCM from cuttings, drains, platform etc. (including muck around OHE mast, signal post etc.) and lifting it beyond 5m from edge of cutting which are upto 3m deep or alternatively carting it upto 50m for disposing it off beyond length of cutting / platform and making up cess wherever low, using muck	Running Metre	15.54
151201	Extra to item nos. from 151190 to 151200 for disposal of muck at a distance beyond 50m for every additional lead of 50 metres or part thereof upto 500 metres	Running Metre / 50 metre Lead	2.07
151202	Extra to item nos. from 151190 to 151200 for disposal of muck for additional lift of 1 metre or part thereof beyond 3 metre lift in case of disposal of muck from track in cutting	Running Metre / 1 metre Lift	4.31
151210	Ballast equalisation & ballast profiling after completion of deep screening work by BCM and/or unloading of ballast by DMT (Ballast Train), as directed by Site Engineer as per IRPWM including heaping of ballast in tamping zone keeping rails & sleeper top free from ballast, spacing and squaring of sleeper, gauging, cleaning of muck, proper fixing of fastening, attention during each round of sleeper tamping in relation to pre & post working	Track Metre	27.58
151220	Making cess in deep screened track by using screened muck discharged by BCM where cess is low or cutting cess to required depth upto 4m from centre of track, where cess is high and disposing off extra muck beyond 5m from edge of cutting which are upto 3m deep or alternatively carting it upto 50m for disposing it off beyond cutting or platforms, so as to make cess as per standard profile including providing proper slope	Track Metre	44.41

Item. No.	Description	Unit	Rate (Rs)
151230	Carrying out packing of sleepers behind BCM including filling ballast when only lifting is carried out by BCM. Rate includes attending track parameters with required manual packing, so as to make track fit for 30 kmph speed	Track Metre	66.61
151240	Ballast Cleaning Machine (BCM) :		
151241	Assisting the operator and maintenance engineers in their duties of day-to-day machine maintenance for BCM at stabling station or at site of working. The activities include : (1) Setting & disconnecting cutter bar; (2) Carrying chain links to connect and disconnect chain; (3) Cutting rail pegs and other obstructions by gas cutting; (4) All gas cutting, welding works & oiling / greasing for machine working & maintenance; (5) Transportation of spares, batteries, trough plates, chain links etc. from site store/ BFRs at stabling station during maintenance and at site during block / break down etc.; (6) Assisting in replacement of spares on machine; (7) Rendering assistance to machine staff, as directed by machine in-charge. {Payment shall be made for the days which have not been pre-notified as off-days}	Per Day	6649.30
151242	Carrying out various miscellaneous works for proper upkeep of crew rest van / rest room, as directed by machine in-charge by (BCM) : (1) Bringing water from nearby source and cleaning machine with water jet or any suitable means; (2) Fuelling machine, duly bringing diesel / hydraulic oil from the stacked drums; (3) Bringing water to the staff rest van or staff rest room, cleaning the rest van / rest room, cooking food for Track Machine staff or bringing food from outside (cost of food shall be borne by the staff concerned)	Per Day	1557.10
151250	Ballast Regulating Machine (BRM) :		
151251	Carrying out various miscellaneous works for proper upkeep of crew rest van / rest room, as directed by machine in-charge (BRM) by : (1) Bringing water from nearby source and cleaning machine with water jet or any suitable means; (2) Fuelling machine duly bringing diesel / hydraulic oil from the stacked drums; (3) Bringing water to staff rest van or staff rest room, cleaning rest van / rest room, cooking food for Track Machine staff or bringing food from outside; (4) Guarding & watching machines, spare parts, oils, grease etc. during day and night time at all locations, wherever necessary, as instructed by the machine in-charge; (5) Cooking food for Track Machine staff or bringing food from outside (cost of food shall be borne by the staff concerned)	Per Day	1041.90
151260	Shoulder Ballast Cleaning Machine (SBCM) :		

Item. No.	Description	Unit	Rate (Rs)
151261	Assisting operator and maintenance engineers in their duties of day-to-day machine maintenance for SBCM at stabling station or at site of working. The activities include : (1) Setting & disconnecting cutter bar; (2) Carrying chain links to connect and disconnect chain; (3) Cutting rail pegs and other obstructions by gas cutting; (4) All gas cutting, welding works & oiling / greasing for machine working & maintenance; (5) Transportation of spares, batteries, trough plates, chain links etc. from site store / BFRs at stabling station during maintenance and at site during block / break down etc.; (6) Assisting in replacement of spares on machine; (7) Rendering assistance to machine staff, as directed by machine in-charge {Payment shall be made for the days which have not been pre-notified as off-days}	Per Day	5809.80
151262	Doing various miscellaneous works for proper upkeep of crew rest van / rest room, as directed by machine in-charge (SBCM) by : (1) Bringing water from nearby source and cleaning machine with water jet or any suitable means; (2) Fuelling machine duly bringing diesel / hydraulic oil from stacked drums; (3) Bringing water to the staff rest van or staff rest room, cleaning the rest van / rest room, cooking the food for Track Machine staff or bringing food from outside (cost of food shall be borne by the staff concerned)	Per Day	1557.10
151263	Screening of ballast haunch, left out of FRM / SBCM reach and utilising screened ballast in track profile alongwith muck for cess making or throwing away within 50m lead and 3m lift when not required for cess repairs	Running Metre	56.03
151264	Making cess in deep screened track by using screened muck discharged by FRM where cess is low or cutting cess to required depth upto 4m from centre of track, where cess is high and disposing off extra muck beyond 5m from edge of cutting which are upto 3m depth or alternatively carting it upto 50m for disposing it off beyond cutting or platforms so as to make the cess as per standard profile including providing proper slope	Track Metre	31.08
151270	CSM, Duomatic and 3X Sleeper Tamping Machines :		
151271	Assisting operator and maintenance engineers in their duties of day-to-day tamping machine maintenance at stabling station or at site of working. The activities include : (1) Replacement, collection and transportation of tamping tools from site to the machine / rest van; (2) All gas cutting, welding works & oiling / greasing for machine working & maintenance; (3) Transportation of tamping tools, spares, batteries etc. from site store / BFRs at stabling station during maintenance and at site during block / break down etc.; (4) Assisting in replacement of spares on machine; (5) Rendering assistance to machine staff, as directed by machine in-charge {Payment shall be made for the days which have not been pre-notified as off-days}	Per Day per machine	4953.63

Item. No.	Description	Unit	Rate (Rs)
151272	Doing various miscellaneous works for proper upkeep of crew rest van / rest room, as directed by machine in-charge (CSM/Duomatic/3X) by : (1) Daily cleaning machine with water jet or any suitable means; (2) Fuelling machine duly bringing diesel / hydraulic oil from stacked drums; (3) Bringing water to staff rest van or staff rest room, cleaning rest van / rest room, cooking food for Track Machine staff or bringing food from outside (cost of food shall be borne by the staff concerned)	Per Day per machine	1041.90
	5. CSM / DUO / 3X Machine Related Works :		
151280	Carrying out pre-tamping, during tamping and post-tamping work for tamping track with all types of rails, sleepers & sleeper density by various Track Tamping machines, which include : (1) Re-adjustment of ballast, heaping-up of ballast, filling-up of cavities in tamping zone by picking ballast from stacks / shoulders / crib of adjoining track upto lead of 50 m to ensure effective packing; (2) Clearing of ballast on sleepers to make them visible to operator, (3) Clearing of ballast over rail foot to facilitate holding of rail by rollers of TTM; (4) Digging, screening and replenishment of ballast at mud pumping / rounded ballast in sleeper crib location; (5) Tightening of loose fittings immediately before & after tamping; (6) Replacement of broken / missing fittings supplied by Railway; (7) Correcting displaced sleepers to position alongwith squaring; (8) Re-setting of worked-out / fallen fittings; (9) Removing and re-fixing joggled fish plates & wooden blocks, wherever necessary; (10) Manual consolidation of ballast in crib / shoulders; (11) Neat boxing/dressing of ballast to standard profile -		
151281	(a) For day time block working	Track Metre	29.27
151282	(b) For night time block working	Track Metre	35.28
151290	Pre, during & post tamping operations, as mentioned in Item no. 151300 at level crossing portion alongwith opening the road, removing and re-fixing of check rails & fittings, painting of running rail & check rail, completing road surface to motorable smooth condition after packing is over, as directed for -		
151291	(a) Level crossing with CC block surface	Each LC	19535.40
151292	(b) Level crossing with asphalted surface	Each LC	21812.40
151293	(c) Level crossing with moorum / earth surface	Each LC	18396.90
151300	Dynamic Track Stabiliser (DGS)		

Item. No.	Description	Unit	Rate (Rs)
151301	Carrying out various miscellaneous works for proper upkeep of crew rest van / rest room, as directed by machine in-charge (DGS) by : (1) Daily cleaning machine with water jet or any suitable means; (2) Fuelling machine duly bringing diesel / hydraulic oil from stacked drums; (3) Bringing water to staff rest van or staff rest room, cleaning rest van / rest room, cooking food for Track Machine staff or bringing food from outside (cost of food shall be borne by staff concerned)	Per Day	1041.90
	6. Unimat Machine Related Works :		
151310	Carrying out pre-tamping, during tamping and post-tamping works for tamping track with all types of rails, sleepers & sleeper density by various Track Tamping machines, which include : (1) Re-adjustment of ballast, heaping-up of ballast, filling-up of cavities in tamping zone by picking ballast from stacks / shoulders / crib of adjoining track upto lead of 50 m to ensure effective packing; (2) Clearing of ballast on sleepers to make them visible to operator; (3) Clearing of ballast over rail foot to facilitate holding of rail by rollers of TTM; (4) Digging, screening and replenishment of ballast at mud pumping / rounded ballast in sleeper crib location; (5) Tightening of loose fittings including check rails immediately before & after tamping; (6) Replacement of broken / missing fittings supplied by Railway; (7) Correcting displaced sleepers to position alongwith squaring; (8) Re-setting worked-out / fallen fittings; (9) Removing and re-fixing joggled fish plates & wooden blocks, OHE bonds & other obstructions, wherever necessary; (10) Removing and re-fixing stretcher bar, as directed; (11) Adjustment in opening and housing of switch for testing operation of points for -		
151311	(a) 1 in 8½ Turnouts	Each Set	12447.60
151312	(b) 1 in 12 Turnouts	Each Set	14218.60
151313	(c) 1 in 16 Turnouts	Each Set	19029.40
151314	(d) 1 in 20 Turnouts	Each Set	21306.40
151315	(e) Derailing Switch	Each Set	8945.45
151316	(f) Extra to Item no. 151311 for night block working (15% of relevant item rate)	Each Set	1867.14
151317	(g) Extra to Item no. 151312 for night block working (15% of relevant item rate)	Each Set	2132.79
151318	(h) Extra to Item no. 151313 for night block working (15% of relevant item rate)	Each Set	2854.41
151319	(i) Extra to Item no. 151314 for night block working (15% of relevant item rate)	Each Set	3195.96
151320	(j) Extra to Item no. 151315 for night block working (15% of relevant item rate)	Each Set	1341.82
151330	UNIMAT (Points & Crossing Tamping Machine) :		

Item. No.	Description	Unit	Rate (Rs)
151331	Assisting the operator and maintenance engineers in their duties of day-to-day Tamping Machine maintenance at stabling station or at site of working. The activities include : (1) Replacement, collection and transportation of tamping tools from site to machine / rest van; (2) All gas cutting, welding works & oiling / greasing for machine working & maintenance; (3) Transportation of tamping tools, spares, batteries etc. from site store / BFRs at stabling station during maintenance and at site during block / break down etc.; (4) Assisting in replacement of spares on machine; (5) Rendering assistance to machine staff, as directed by machine in-charge; {Payment shall be made for the days which have not been pre-notified as off-days}	Per Day per machine	4612.65
151332	Carrying out various miscellaneous works for proper upkeep of crew rest van / rest room, as directed by machine in-charge (Unimat) by : (1)) Daily cleaning machine with water jet or any suitable means; (2) Fuelling machine duly bringing diesel / hydraulic oil from stacked drums; (3) Bringing water to staff rest van or staff rest room, cleaning rest van / rest room, cooking food for Track Machine staff or bringing food from outside (cost of food shall be borne by staff concerned)	Per Day per machine	1041.90
	7. Miscellaneous		
151340	Laying of auxiliary track with all types of rails, already available on cess, fixing rails on wooden blocks / CST-9 pots at 2m interval, true to square, to required alignment & level, fixing with spikes / screws / keys, linking rails with fish plates, bolts & nuts to a gauge of 3400mm (with reference to centre line of existing BG track), levelling both the rails to same plane as that of BG track over stone ballast by way of removing ballast from shoulders of existing track, providing one proper packing. Subsequently, dismantling auxiliary track after completion of PQRS work at site by way of removing wooden blocks / CST-9 pots and carrying same to next stretch / location, if required, where auxiliary track has to be laid and spreading the same at required locations and leaving rails there itself for carrying out TRR work later.	Track Metre	58.08
151350	Through rail renewal of BG track on PSC sleepers of any density with all types of rails / rail panels lying in auxiliary track or on cess or involving removal of fastenings, carting and stacking released materials. It also includes fastening rails taken from auxiliary track to sleepers to correct gauge with fish plates, bolts & nuts to a neat gauge of 1673 mm including handling of rails by way of dragging, pairing etc. and leading released service rails to load into BFR / Lorry or to shift to next location including crossing of track with lead & lift, as directed -		
151351	(a) For rails upto 13m length	Track Metre	88.23
151352	(b) For rails of more than 13m and upto 40m length	Track Metre	82.70
151353	(c) For rails above 40m length	Track Metre	83.35

Item. No.	Description	Unit	Rate (Rs)
151360	Through Rail renewal with free service rails of all types by removing existing running rails, already cut into free rails / rail panels for making auxiliary track, including attending alignment, cross level, gauging, packing; wherever required including crossing of track, as directed	Track Metre	88.23
151370	Reconditioning of worn out tamping tools of track machines like CSM, Duomatic, Unimat, Tamping Express etc. by approved welding electrode with contractor's welding plant, power, welder, labour etc. so as to bring the worn out tamping tools to its original shape & size and to achieve minimum 5 km of tamping with wear upto 20% of the original size of tool	Each	666.76
151380	Reconditioning of worn out tamping tools of track machines; like CSM, Duomatic, Unimat, Tamping Express etc. using special hard drawn / flux covered self shielded RDSO approved electrodes for enhanced life cycle with contractor's welding plant, power, welder, labour etc. so as to bring the worn out tamping tools to its original shape & size and to achieve minimum 50 km of tamping with wear upto 20% of original size of tool.	Each	1385.18
151390	Supply of Hydraulic Hose pipes of different diameter, approved by SAE (Society of Automotive Engineers) or DIN (Deutsches Institute for Norms) of different diameter, and also as approved by Railway Engineer, suitable for fixing in Heavy Track Machines		
151391	(a) No. 4-SAE 100R2 with max. WP400 bar and minimum bursting pressure 1600 bar of running length	Metre	86.25
151392	(b) No. 6-SAE 100R2 with max. WP330 bar and minimum bursting pressure 1320 bar of running length	Metre	103.50
151393	(c) No. 8-SAE 100R2 with max. WP276 bar and minimum bursting pressure 1103 bar of running length	Metre	115.00
151394	(d) No. 10-SAE 100R2 with max. WP 250 bar and minimum bursting pressure 1000 bar of running length	Metre	156.40
151395	(e) No. 10-SAE 100R5 with max. WP 121 bar and minimum bursting pressure 483 bar of running length	Metre	179.40
151396	(f) No. 12-SAE 100R2 with max. WP215 bar and minimum bursting pressure 860 bar of running length	Metre	195.50
151397	(g) No. 12-SAE 100R9 with max. WP 250 bar and minimum bursting pressure 1034 bar of running length	Metre	230.00
151398	(h) No. 16-SAE 100R2 with max. WP165 BAR and minimum bursting pressure 660BAR of running length	Metre	1069.50
151399	(i) No. 20-SAE 100R2 with max. WP125 BAR and minimum bursting pressure 500BAR of running length	Metre	1109.75
151400	(j) No. 24-SAE 100R5 with max. WP35 BAR and minimum bursting pressure 140BAR of running length	Metre	460.00
151410	Supply of Chain Bolt, Plasser Part No. 61.04.212 (RDSO specification No. TM/HM/6 /111 and RDSO Drawing No. TM/9302 (Revised)	Each	59.80
151420	Supply of T Head Bolt with Double Nuts & Spring Washer, Plasser Part No. 61.04.218 for BCM	Each	10.35
151430	Supply of CSK Bolts with double nuts of different sizes with one spring washer of make TVS / UNBROKE for Track Machines -		
151431	(a) Part No. M 12mm x 60mm or 12mm x 65mm	Each	24.73
151432	(b) Part No. M 16mm x 60 mm	Each	47.15
151433	(c) Part No. M 16mm x 90mm	Each	66.13
151434	(d) Part No. M 20mm x 60mm	Each	140.30

Item. No.	Description	Unit	Rate (Rs)
151435	(e) Part No. M 20mm x 90mm	Each	180.55
151440	Supply of Hex Bolts with double nuts and one spring washer of different sizes of make TVS / UNBROKE for Track Machines -		
151441	(a) Part No. M 8mm x 60mm	Each	20.13
151442	(b) Part No. M 10mm x 60mm	Each	23.00
151443	(c) Part No. M 12mm x 90mm	Each	27.60
151444	(d) Part No. M 16mm x 60mm	Each	47.15
151445	(e) Part No. M 24mm x 130mm	Each	195.50
151450	Supply of Allen Bolts with double nuts of different sizes and one spring washer of make TVS/UNBROKE for Track Machines -		
151451	(a) Part No. M 12mm x 80mm	Each	40.25
151452	(b) Part No. M 16mm x 125mm	Each	98.33
151460	Supply of Shell Amola-150 grade hydraulic oil or equivalent	Litre	126.50
151470	Supply of engine oil CF4-15W40 or equivalent of HPCL / BPCL / IOCL	Litre	115.00
151480	Supply of hydraulic oil SS-68 or equivalent of HPCL / BPCL / IOCL	Litre	104.65
151490	Supply of Transmission oil SAE-30 or equivalent of HPCL / BPCL / IOCL	Litre	140.30
151500	Supply of Gear oil EP-90 or equivalent of HPCL / BPCL / IOCL	Litre	160.43
151510	Supply of Grease MP-2 or equivalent of HPCL / BPCL / IOCL	Kg	143.18
151520	Supply of Shell Alvania RL-2 Grease or equivalent	Kg	425.50
151530	Supply of Fixing Pin (Plasser Part No. 8 x 40 DIN 1481), Make Plasser or similar	Each	4.14
151540	Supply of Lock washer (Plasser Part No. 64.08.2035), Make Plasser or similar	Each	15.64
151550	Supply of Round shaft chisel (Plasser Part No. 64.08.2034 GEH), Make Plasser or similar	Each	81.08
151560	Supply of U Clamp(Big) (Plasser Part No. 64.09.5248) Make Plasser or similar	Each	225.06
151570	Supply of Moon washer, suitable for BCM screens :		
151571	(a) 12mm dia. hole size	Each	129.95
151572	(b) 16mm dia. hole size	Each	160.43
151573	(c) 18mm dia. hole size	Each	200.10
151580	Providing lighting arrangements with halogen lamps on and around machine during machine working in night time blocks, with contractor's own generator, consumables, all necessary electrical fittings, operators etc. for -		
151581	(a) BCM (7.5 kVA generator and 12x500 W)	Per Night	2908.35
151582	(b) FRM (7.5 kVA generator and 12x500 W)	Per Night	2908.35
151583	(c) CSM / DUO / 3X (5 kVA generator and 8x500 W)	Per Night	2494.35
151584	(d) UNIMAT (7.5 kVA generator and 12x500 W)	Per Night	2908.35
151585	(e) DGS (2.5 kVA generator and 4x500 W)	Per Night	1601.38
151586	(f) BRM (5 kVA generator and 8x500 W)	Per Night	2494.35
151590	Carrying out minor / routine welding works by contractor's three phase welding plant and gas cutting etc. which are required to the machine during day & night time with contractor's men, equipments & consumables in connection with machine maintenance for -		
151591	(a) BCM	Per Day	1299.50
151592	(b) FRM / SBCM	Per Day	1299.50
151593	(c) CSM / DUO / 3X / UNIMAT	Per Day	1498.45
151594	(d) BRM	Per Day	1328.25

Item. No.	Description	Unit	Rate (Rs)
151600	Supplying and fixing wear resistant contact plate of various thickness on BCM of IMPACTUDOUR or equivalent make as per standard drawing of Plasser and as directed by site engineer at BCM stabled station with contractor's welding, generator, electrodes, consumables, T&P etc. for -		
151601	(a) 18mm thickness	Sqm	13499.85
151602	(b) 20mm thickness	Sqm	16489.85
151610	Supplying and fixing of corner roller complete Plasser Part no. 64.06.5000.21. One set consists of following items – (i) Corner roller 6664.08.5047 - 1 no. (ii) Ring 64.08.5048 - 1 no. (iii) Washer 64.08.05049 - 2 nos. (iv) Bearing 20313MBC4 - 2 nos. (v) Circlip 140.K.DIN.984 - 1 no. (vi) Ring 6313AV - 2 nos.	Set	29909.20
151620	Providing lighting arrangement during night traffic block, to be availed as per instructions of engineer in-charge. Scope of work includes contractor's inflatable emergency tower light two nos. of 400 watt, metal halide lamp, 2.5 kVA petrol engine of 3 hp each with two plugs for halogen each for provision of light at work site. Maintenance of complete unit shall be with contractor's men, materials, equipments and consumables. {Payment shall be made only for that day on the basis of hours utilised when Railway's site engineer actually puts up his requirement. Also, standby arrangement shall be ensured by contractor for any eventuality of failure}	Per Hour	148.70
151630	Providing lighting arrangements for about 100 meters length for block working during night time involving arranging 2.5 kVA generator, 40 CFL / tube lights of 40 Watts (approx.) each fixed to the bullies at required locations on both sides of track including cost of consumables, such as diesel and engine oil etc. with all contractor's labour, tools, plants, machinery, electric wire, switches and connected materials etc. including shifting of generators after each block, all lead and lift complete and as directed by the Engineer in-charge	Per Hour	291.96
151640	Recording field data of Existing Track with theodolite / total station for designed mode tamping by track tamping machine	Track Kilometer	1461.27

CHAPTER - 16 : Small Track Machines			
Item No.	Description of Item	Unit	Rate (Rs)
	1. Rails :		
161010	Quick cutting with abrasive rail cutter of all types of rail sections including wear resistant, head hardened rails upto 110 UTS, with contractors tools & plants, equipment, consumable with all lead & lift etc. complete as directed by Engineer in-charge. Abrasive Rail Cutter will be as per RDSO Specification No. TM/SM/1 (Rev. 01 of 2007) with latest status of RDSO; Rail Cutting Wheel Abrasive Disc will be as per RDSO Specification No. TM/SM/2 (Rev. 01 of 2007) -		
	(i) Outside Track -		
161011	(a) 60 Kg - 110 UTS	Each	293.43
161012	(b) 60 Kg - 90 UTS	Each	281.20
161013	(c) 52 Kg - 90 UTS	Each	269.95
161014	(d) 52 Kg - 72 UTS & other rails	Each	259.57
	(ii) On Running Line -		
161015	(a) 60 Kg - 110 UTS	Each	330.65
161016	(b) 60 Kg - 90 UTS	Each	316.87
161017	(c) 52 Kg - 90 UTS	Each	304.20
161018	(d) 52 Kg - 72 UTS & other rails	Each	292.50
161020	Drilling holes of 16 mm to 32 mm dia. with Rail Drilling machine in all types of rail section with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Rail Drilling Machine will be as per RDSO Specification No. TM/SM/3, dated 24.04.1991 for -		
161021	(a) Outside Track	Each	47.72
161022	(b) On Running Line	Each	76.25
161030	Cutting of rails with Rail Cutting Machine (Saw type) in all types of rail sections with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Rail Cutting Machine (Saw type) will be as per RDSO Specification No. TM/SM/4, dated 24.04.1991 for -		
	(i) Outside Track -		
161031	(a) 60 Kg - 110 UTS	Each	305.27
161032	(b) 60 Kg - 90 UTS	Each	239.86
161033	(c) 52 Kg - 90 UTS	Each	186.56
161034	(d) 52 Kg - 72 UTS & other rails	Each	139.92
	(ii) On Running Line -		
161035	(a) 60 Kg - 110 UTS	Each	430.36
161036	(b) 60 Kg - 90 UTS	Each	387.32
161037	(c) 52 Kg - 90 UTS	Each	270.09
161038	(d) 52 Kg - 72 UTS & other rails	Each	191.36
161040	Bending & De-kinking with Hydraulic rail bender (Jim Crow) heavy duty in all types of rail sections of flat bottom rails maximum upto 40mm with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Hydraulic Rail Bender (Jim Crow) Heavy duty will be as per RDSO Specification No. TM/SM/5, dated 08.05.1991 for -		
161041	(a) Outside Track	Each	65.84
161042	(b) On Running Line	Each	91.60

Item No.	Description of Item	Unit	Rate (Rs)
161050	Chamfering of drilled fish bolt holes in rails of any section and any UTS with chamfering kit and with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Chamfering Kit will be as per RDSO's Specification No. TM-53 Rev. 01 of 2004	Each	12.75
161060	Pulling of rail in LWR track by hydraulic rail tensor (Non-infringing type) for maintaining specified gap at rail joints for A.T. welding with contractor's tools & plant, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Hydraulic Rail Tensor (Non-infringing type) will be as per RDSO's Specification No. TM/SM/32, dated 20.12.1991	Each Gap	1210.26
161070	Trimming of extra weld metal from rail top (top and sides) of A.T. welded joint after welding operation by double action weld trimmer with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge, Double Action Weld Trimmer will be as per RDSO's Specification No. TM/SM/9, dated 16.08.1991	Each	328.47
161080	Grinding A.T. welded joint after weld trimming operation is completed by Rail Profile Weld Grinder with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Rail Profile Weld Grinder will be as per RDSO Specification No. TM/SM/10, dated 16.08.1991	Each	99.50
161090	Cutting of rails with electrically operated Rail Cutting Machine in all types of rail sections, with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge as per Specifications : {(i) Prime mover : 1 hp 1440 rpm electric motor (ii) Time taken for each cut - (a) for 90R rails : 10 to 12 minutes (b) for 52 kg rail : 12 to 20 minutes (c) for 60 kg rail : 20 to 25 minutes (iii) Man power required : 2 men; (iv) Weight of machine : 50 kg approx (machine to comprise of cutting unit coupled with driving electric to form a compact unit) (v) Clamping arrangement : a sturdy fabricated device for firm grip of different rail sections for automatic clamping in position for ensuring a straight cut (vi) Handling & transportation : Machine to be fitted with monorail wheel arrangement and a handle of convenient height to enable it to be pushed over one rail by one person to take it to the work-site} -		
	(i) When Electricity provided by static power supply :		
161091	(a) Outside track	Each	163.22
161092	(b) On Running track	Each	248.73
	(ii) When power supply by DG set :		
161093	(a) Outside track	Each	236.33
161094	(b) On Running track	Each	321.84

Item No.	Description of Item	Unit	Rate (Rs)
161100	Drilling holes of 16 mm to 32 mm dia. with electrically operated Rail Drilling Machine in all types of rail sections, with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge as per Specification : {(i) Manpower required : 2 Men. (ii) Weight of machine : 45kg. approx. (iii) Handling & transportation : The machine to be fitted with monorail wheel arrangement and a handle of convenient height to enable it to be pushed over one rail by one person to take it to the work site. (iv) Prime mover : 1 HP 1440 RPM Electric motor. (v) No. of holes normally be drilled in a day : 60 holes} -		
	(i) When Electricity provided by static-power supply :		
161101	(a) Outside track	Each	41.34
161102	(b) On Running track	Each	49.93
	(ii) When power supply by DG set :		
161103	(a) Outside track	Each	57.25
161104	(b) On Running track	Each	65.84
	2. Sleepers :		
161110	Extraction of jammed ERC by Heavy Duty Hydraulic Extractor with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Heavy Duty Hydraulic Extractor for jammed ERCs (10 Ton capacity) shall be as per RDSO's Specification No. TM/SM/6, dated 8.05.1991	Each	31.06
161120	Sleeper Spacing, Re-spacing / Squaring of sleeper by Hydraulic Sleeper Sspacer with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Hydraulic Sleeper Spacer shall be as per RDSO's Specification No. TM/SM/17, dated 31.03.1992	Each	52.48
161130	Quick removal of damaged concrete sleepers and restoration of railway track in case of accidents / derailments and other such emergent situations by Concrete Sleeper Breaker & angle grinder with contractor's tools & plants, equipments, consumable etc. with all lead & lift complete, as directed by Engineer in-charge. Concrete Sleeper Breaker will be as per RDSO's Specification No. TM/SM/30, dated 26.10.1995	Each	133.13
161140	Breaking of brick work, asphalt and rocks by Concrete Sleeper Breaker with contractor's tools & plantS, equipments, consumable etc. with all lead & lift complete, as directed by Engineer in-charge. Concrete Sleeper Breaker shall be as per RDSO's Specification No. TM/SM/30, dated 26.10.1995	Cum	1331.32

Item No.	Description of Item	Unit	Rate (Rs)
161150	Drilling of holes (vertically) into concrete sleeper in-situ for fixing guard rails and check rails on concrete sleeper track at specified locations by concrete sleeper drilling machine with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge as per RDSO's Specification : {(i) Machine shall be able to drill hole in concrete sleeper from 16 mm to 22 mm dia. (ii) Action of machine shall be fast enough to drill hole in minimum time, i.e. it shall not take more than 10 minute for drilling hole of dia. 22mm and depth 150mm. (iii) Machine shall be able to drill hole of required size in-situ condition. (iv) In case of electrically operated machine, operating voltage shall be 220-250 V to enable it to operate with domestic supply of electricity, single phase, A.C., 50 Hz or with single phase light weight portable generator commonly available in the market, (v) Weight of machine shall not exceed 10 kg for electrically machine (without prime mover) and 50 kg for Diesel/Petrol operated machine (including prime mover) (vi) Machine shall be either non-infringing type or capable of being removed within 30 seconds to the face of approaching train.}	Each	59.80
	3. Fittings :		
161160	Measuring of Toe Load of ERC during service in field by Toe Load Measuring Device (Mechanical) with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Toe Load Measuring Device (Mechanical) will be as per RDSO's Specification No. TM/SM/14 (Rev. 01 of 2005 with all updation)	Each	3.03
161170	Measuring of Toe Load of ERC during service in field by Electronic Toe Load Measuring Device with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Electronic Toe Load Measuring Device will be as per RDSO's Specification No. TM/SM/ETLMD/218 (Rev. 01 of 2003 with all updation)	Each	3.38
161180	Carrying the rails / rail panels, concrete sleepers (using the attachments) at site of work for 300 metres lead by Insulated rail dolly with contractors tools and plant, equipment, consumable with all lead and lift etc. complete as directed by Engineer-in-charge as per Specifications : {(i) Tubular frame : made of mild steel heavy duty pipe. (ii) Chain : alloy steel chain conforming to IS : 10131/82 grade I or (3) of 12 mm size of rail handling (iii) Attachment for concrete sleeper : the chain sling conforms to IS : 2760/80, having lifting link & grippers assembly:		
161181	(a) Sleeper	Each	39.43
161182	(b) Rail	Each	402.62
	4. Miscellaneous :		

Item No.	Description of Item	Unit	Rate (Rs)
161190	Loading / unloading of concrete sleepers from cess to BFR / BRH wagons and vice-versa by jib crane attachable to BFR / BRH for handling concrete sleepers with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge as per RDSO's Specifications : {(i) Safe working capacity : 500 kg. (ii) Swing: 360 degree. (iii) Swing Radius (Minimum) : 1350 mm. (iv) Efforts at full load : 20 kg. (v) Design, fabrication and erection of jib crane alongwith its base frame shall be such that it takes minimum assembly and attachment time to BFR / BRH. Assembly and erection over and removal from BFR / BRH shall not take more than 30 minutes. (vi) Design & construction of jib crane with its assemblies shall be such that it allows loading / unloading of concrete sleepers from BFR / BRH in 4 layers. (vii) Loading / unloading time for a concrete sleeper from BFR to cess and vice versa shall not be more than 5 minutes}	Each	23.68
161200	Tamping of track for picking up slacks in concrete sleeper track by Hand Held Off Track Tamper (Power Pack Version) with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Off-track tamper (Power Pack Version) will be as per RDSO Specification No. TM/SM/OTT/320, dated 28.01.2009	Each	32.15

CHAPTER - 17 : Handling of Materials			
Item No.	Description	Unit	Rate (Rs)
	1. Rails :		
171010	Loading of rails, SEJ, Glued joint etc. of any section and length upto 14 metres in Wagons / Truck / Tractor including lead upto 50 metres and lift upto 5 metres -		
171011	(a) In wagons during period of traffic block	MT	532.34
171012	(b) In wagons in yards not involving traffic block or on lines, not opened to traffic	MT	209.77
171013	(c) In Truck / Tractor	MT	109.15
171020	Loading of rails of any section and length from 14 metre to 40 metre, in wagons including lead upto 50 metre and lift upto 5 metre -		
171021	(a) In wagons during period of traffic block	MT	674.66
171022	(b) In wagons in yards not involving traffic block or on lines, not opened to traffic	MT	497.17
171030	Loading of tongue rail, stock rail, switch assembly and crossings of any section and length with / without P.way fittings and fastenings, in Wagon / Truck / Tractor including lead upto 250 metre and lift upto 5 metre -		
171031	(a) In wagons during period of traffic block	MT	368.95
171032	(b) In wagons in yards not involving traffic block or on lines, not opened to traffic	MT	294.19
171033	(c) In Truck / Tractor	MT	263.14
171040	Loading, unloading and hauling of 52Kg / 60Kg rail upto 13 metre length by Railway's rail dolly to the nominated location under traffic in case road carriage is not possible with lead upto 250 metre and all lift upto 5 metre during block period	MT	639.81
171041	Extra to Item no. 171040 for lead beyond 250 metre and up to 1 Km	MT	221.79
171042	Extra to Items no. 171040 & 171041 for lead beyond 1 Km for every subsequent Km or part thereof and upto 10 Km	MT / KM	44.36
171043	Extra to Item no. 171040 with contractor's Rail Dolly	MT	42.71
171050	Loading, unloading and hauling of 52Kg / 60Kg rail more than 13 metre and upto 40 metre length by Railway's rail dolly to the nominated location under traffic in case road carriage is not possible with lead upto 250 metre and lift upto 5 metre during block period	MT	634.86
171051	Extra to Item no. 171050 for lead beyond 250 metre and up to 1 Km	MT / KM	272.37
171052	Extra to Items no. 171050 & 171051 for lead beyond 1 Km for every subsequent Km or part thereof and upto 10 Km	MT / KM	54.47
171053	Extra to Item no. 171050 with contractor's Rail Dolly	MT	76.26
171060	Loading, unloading and hauling of 52Kg / 60Kg rail upto 13 metre length by Railway's Dip Lorry to the nominated location under traffic in case road carriage is not possible with lead upto 250 metre and all lift upto 5 metre during block period	MT	574.54
171061	Extra to Item no. 171060 for lead beyond 250 metre and up to 1 Km	MT / KM	188.18
171062	Extra to Items no. 171060 & 171061 for lead beyond 1 Km for every subsequent Km or part thereof and upto 10 Km	MT / KM	37.64
171063	Extra to Item no. 171060 with contractor's Dip Lorry	MT	21.95

Item No.	Description	Unit	Rate (Rs)
171070	Loading, unloading and hauling of 52Kg / 60Kg rail more than 13 metre and upto 40 metre length by Railway's Dip Lorry to the nominated location under traffic in case road carriage is not possible with lead upto 250 metre and lift upto 5 metre during block period	MT	571.33
171071	Extra to Item no. 171070 for lead beyond 250 metre and up to 1 Km	MT / KM	231.03
171072	Extra to Items no. 171070 & 171071 for lead beyond 1 Km for every subsequent Km or part thereof and upto 10 Km	MT / KM	46.21
171073	Extra to Item no. 171070 with contractor's Dip Lorry	MT	25.88
171080	Unloading of rails of any section and length upto 14 metre, in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer including lead upto 250 metre and lift upto 5 metre -		
171081	(a) During period of traffic block	MT	39.69
171082	(b) In yards, not involving traffic block or in lines, not opened to traffic	MT	15.33
171083	(c) From Truck / Trailer	MT	35.63
171090	Unloading of rails of any section and length from 14 metre to 40 metre, in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer including lead upto 250 metre and lift upto 5 metre -		
171091	(a) During period of traffic block	MT	43.65
171092	(b) In yards, not involving traffic block or in lines, not opened to traffic	MT	18.84
171100	Unloading of all type of rails of length 130 metre and beyond from end unloading rake -		
171101	(a) During period of traffic block	MT	65.65
171102	(b) For unloading in yards, not involving traffic block or in lines, not opened to traffic	MT	32.62
171110	Crossing of rail panel unloaded on other side of the existing track to double line side under running traffic conditions in between trains under available line block and keeping rails without any infringement to running track -		
171111	(a) Rails upto and including 13 m length	Running Metre	30.45
171112	(b) Rails more than 13 m and upto 40 m length	Running Metre	35.62
171113	(c) Rails more than 40 m length	Running Metre	45.51
171120	Loading of Wooden / Metal sleepers including existing fittings and fastenings in Depot / Station / Mid-section between stations in a neat manner to departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track with free lead upto 250 metre and lift upto 5 metre, if required with contractor's labour, tools & plants, machinery, consumables etc. -		
171121	(a) In wagons during period of traffic block	MT	507.31
171122	(b) In wagons in yards, not involving traffic block or in tracks, not opened to traffic	MT	239.46
171123	(c) In Truck / Trailer	MT	202.50
	2. Sleepers :		

Item No.	Description	Unit	Rate (Rs)
171130	Loading of 52kg / 60kg PSC line and special sleepers upto 2.7 metre length including existing fittings and fastenings in Depot / Station / Mid-section between stations in a neat manner to departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track with free lead upto 250 metre and lift upto 5 metre, if required with contractor's labour, tools & plants, machinery, consumables etc. -		
171131	(a) In wagons during period of traffic block	MT	586.37
171132	(b) In wagons in yards, not involving traffic block or in tracks, not opened to traffic	MT	286.69
171133	(c) In Truck / Trailer	MT	249.73
171140	Loading of 52kg / 60kg PSC line and special sleepers beyond 2.7 metre length including existing fittings and fastenings in Depot / Station / Mid-section between stations in a neat manner to departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track with free lead upto 250 metre and lift upto 5 metre, if required with contractor's labour, tools & plants, machinery, consumables etc. -		
171141	(a) In wagons during period of traffic block	MT	598.02
171142	(b) In wagons in yards, not involving traffic block or in tracks, not opened to traffic	MT	295.34
171143	(c) In Truck / Trailer	MT	274.64
171150	Loading, unloading and hauling of Wooden / Steel / CI Sleeper by Railway's rail dolly to the nominated location under traffic in case road carriage is not possible with lead upto 250 metre and all lift upto 5 metre during block period -	MT	396.12
171151	Extra to Item no. 171150 for lead beyond 250 metre and up to 1 Km	MT	155.25
171152	Extra to Items no. 171150 & 171151 for lead beyond 1 Km for every subsequent Km or part thereof and upto 10 Km	MT / KM	31.05
171153	Extra to Item no. 171150 with contractor's Rail Dolly	MT	18.40
171160	Loading, unloading and hauling of PSC Sleepers of 52Kg / 60Kg by Railway's rail dolly to the nominated location under traffic in case road carriage is not possible with lead upto 250 metre and all lift upto 5 metre during block period -	MT	440.13
171161	Extra to Item no. 171160 for lead beyond 250 metre and up to 1 Km	MT	172.50
171162	Extra to Items no. 171160 & 171161 for lead beyond 1 Km for every subsequent Km or part thereof and upto 10 Km	MT / KM	34.50
171163	Extra to Item no. 171160 with contractor's Rail Dolly	MT	20.44
171170	Loading, unloading and hauling of Wooden / Steel / CI Sleeper by Railway's Dip Lorry to the nominated location under traffic in case road carriage is not possible with lead upto 250 metre and all lift upto 5 metre during block period -	MT	313.40
171171	Extra to Item no. 171170 for lead beyond 250 metre and up to 1 Km	MT	86.35
171172	Extra to Items no. 171170 & 171171 for lead beyond 1 Km for every subsequent Km or part thereof and upto 10 Km	MT / KM	17.27
171173	Extra to Item no. 171170 with contractor's Dip Lorry	MT	20.13
171180	Loading, unloading and hauling of PSC Sleepers of 52Kg / 60Kg by Railway's Dip Lorry to the nominated location under traffic in case road carriage is not possible with lead upto 250 metre and all lift upto 5 metre during block period -	MT	376.08

Item No.	Description	Unit	Rate (Rs)
171181	Extra to Item no. 171180 for lead beyond 250 metre and up to 1 Km	MT / KM	103.62
171182	Extra to Items no. 171180 & 171181 for lead beyond 1 Km for every subsequent Km or part thereof and upto 10 Km	MT / KM	20.72
171183	Extra to Item no. 171180 with contractor's Dip Lorry	MT / KM	24.15
171190	Leading Wooden / Steel / CI sleepers by road vehicles with contractor's vehicle, crane, crew, consumables, labour, tools & plants etc. excluding loading / unloading, to destination with all contractor's labour, tools/plants -		
171191	(a) Lead upto 10 Km	MT	178.79
171192	(b) Extra to Item no. 171191 for additional lead over 10 Km for every 5 Km lead or part thereof upto 100 Kms	MT / 5 KM	21.58
171193	(c) Extra to Items no. 171191 & 171192 for additional lead beyond 100 Km for every 5 Km or part thereof upto 400 Kms	MT / 5 KM	11.63
171194	(d) Extra to Items no. 171191, 171192 & 171193 for additional lead beyond 400 Km for every 5 Km or part thereof upto 1000 Kms	MT / 5 KM	7.73
171200	Leading all types of PSC sleepers of upto 2.7 metre length by road vehicles with contractor's vehicle, crane, crew, consumables, labour, tools & plants etc. excluding loading / unloading, to destination with all contractor's labour, tools/plants -		
171201	(a) Lead upto 10 Km	MT	157.75
171202	(b) Extra to Item no. 171201 for additional lead over 10 Km for every 5 Km lead or part thereof upto 100 Kms	MT / 5 KM	19.04
171203	(c) Extra to Items no. 171201 & 171202 for additional lead beyond 100 Km for every 5 Km or part thereof upto 400 Kms	MT / 5 KM	10.26
171204	(d) Extra to Items no. 171201, 171202 & 171203 for additional lead beyond 400 Km for every 5 Km or part thereof upto 1000 Kms	MT / 5 KM	6.82
171210	Leading all types of PSC sleepers beyond 2.7 metre length by road vehicles with contractor's vehicle, crane, crew, consumables, labour, tools & plants etc. excluding loading / unloading, to destination with all contractor's labour, tools/plants -		
171211	(a) Lead upto 10 Km	MT	167.61
171212	(b) Extra to Item no. 171211 for additional lead over 10 Km for every 5 Km lead or part thereof upto 100 Kms	MT / 5 KM	20.23
171213	(c) Extra to Items no. 171211 & 171212 for additional lead beyond 100 Km for every 5 Km or part thereof upto 400 Kms	MT / 5 KM	10.90
171214	(d) Extra to Items no. 171211, 171212 & 171213 for additional lead beyond 400 Km for every 5 Km or part thereof upto 1000 Kms	MT / 5 KM	7.25
171220	Unloading of Wooden / Steel / CI sleepers in Depot / Station / Mid-section between stations in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track and lead upto 250 metre & lift upto 5 metre -		
171221	(a) During period of traffic block	MT	168.47
171222	(b) In yards not involving traffic block or on lines, not opened to traffic	MT	91.60
171223	(c) From Truck / Trailer	MT	79.28

Item No.	Description	Unit	Rate (Rs)
171230	Unloading of 52kg / 60kg PSC line and special sleepers upto 2.7 metre length in Depot / Station / Mid-section between stations in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track and lead upto 250 metre & lift upto 5 metre with contractor's labour, tools & plants, machinery, consumables etc. -		
171231	(a) During period of traffic block	MT	158.68
171232	(b) In yards not involving traffic block or on lines, not opened to traffic	MT	82.70
171233	(c) From Truck / Trailer	MT	70.38
171240	Unloading of 52kg / 60kg PSC special sleepers beyond 2.7 metre length in Depot / Station / Mid-section between stations in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track and lead upto 250 metre & lift upto 5 metre with contractor's labour, tools & plants, machinery, consumables etc. -		
171241	(a) During period of traffic block	MT	161.41
171242	(b) In yards not involving traffic block or on lines, not opened to traffic	MT	96.49
171243	(c) From Truck / Trailer	MT	82.11
171250	Spreading of New / SH PSC sleepers along track on either side manually or mechanically including loading, unloading & transportation, if required with lead of every 250m or part thereof upto total lead of 1000m and all lifts	Each Per 250 metre Lead	41.72
171251	Extra to Item no. 171250 for additional lead of every 500m or part thereof beyond 1 km and upto 3 km with all lift	Each Per 500 metre Lead	23.06
171260	Collecting and stacking released Wooden / Steel / CI sleepers, classification-wise within free lead of 1000 metre and lift of 5 metre including crossing of single track including existing track fittings and fastenings, i.e. keys, cotters, bearing plates, tie bars etc.	Each	16.17
3. Miscellaneous Items :			
171270	Lifting the removed rail sleeper panels from the bank slopes or any other locations within a lead of upto 250 metre and lift / descent upto 5 metre by using suitable capacity pochain/crane without causing damages to rail-sleeper panel and placing the same on formation to correct level and alignment during line block / suspension of line	Running Metre	171.28
171280	Leading Rails / Switches / Crossings / SEJ Rails / Glued Joints of any rail section with or without fittings by road with contractor's vehicle, crane, crew, consumables, labour, tools & plants etc. excluding loading / unloading, to destination with all contractor's labour, tools/plants -		
171281	(a) Lead upto 10 Km	MT	148.99
171282	(b) Extra to Item no. 171281 for additional lead beyond 10 Km for every 5 Km or part thereof upto 100 Km	MT / 5 KM	17.98
171283	(c) Extra to Items no. 171281 & 171282 for additional lead beyond 100 Km for every 5 Km or part thereof upto 400 Km	MT / 5 KM	9.69
171284	(d) Extra to Items no. 171281, 171282 & 171283 for additional lead beyond 400 Km for every 5 Km or part thereof upto 1000 Km	MT / 5 KM	6.44

Item No.	Description	Unit	Rate (Rs)
171290	Loading all types of track fittings and fastenings, i.e. fish plates, joggled fish plate, clamps, bearing plates, tie bars, keys, cotters, ERCs, GR pads, liners and other fittings into Wagons / Truck / Trailer -		
171291	(a) During period of traffic block	MT	304.91
171292	(b) In yards not involving traffic block or on lines, not opened to traffic	MT	160.87
171293	(c) In Truck / Trailer	MT	135.00
171300	Leading of miscellaneous items, P.Way fittings etc. by road in contractor's vehicles with crane, crew, consumables, labour, tools & plants etc. excluding loading/unloading, to destination with all contractor's labour, tools/plants -		
171301	(a) Lead upto 10 Km	MT	154.72
171302	(b) Extra to Item no. 171301 for additional lead beyond 10 Km for every 5 Km or part thereof upto 100 Km	MT / 5 KM	18.68
171303	(c) Extra to Items no. 171301 & 171302 for additional lead beyond 100 Km for every 5 Km or part thereof upto 400 Km	MT / 5 KM	10.06
171304	(d) Extra to Items no. 171301, 171302 & 171303 for additional lead beyond 400 Km for every 5 Km or part thereof upto 1000 Km	MT / 5 KM	6.69
171310	Unloading of Switches / Crossings / SEJ Rails / Glued Joints of any rail section and length with or without P.Way fittings & fastenings in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with lead upto 250 metre & lift upto 5 metre -		
171311	(a) During period of traffic block	MT	191.66
171312	(b) In yards not involving traffic block or on lines, not opened to traffic	MT	105.31
171313	(c) From Truck / Trailer	MT	88.06
171320	Unloading of fish plates, joggled fish plate, clamps, bearing plates, tie bars, keys, cotters ERCs, GR pads, liners and other fittings in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Trailer with lead upto 250 metre & lift upto 5 metre -		
171321	(a) During period of traffic block	MT	143.74
171322	(b) In yards not involving traffic block or on lines, not opened to traffic	MT	78.98
171323	(c) From Truck / Trailer	MT	66.05
171330	Collection and stacking of various materials at nominated stacking location with serviceable and un-serviceable ones separately within a lead upto 250 metre and lift upto 5 metre including crossing of single track wherever necessary, including posting of look-out man during collection / stacking -		
171331	(a) Rails less than 6 metre	MT	353.31
171332	(b) Rails upto length of 6 metre, all types of crossings, SEJ, Glued Joints, Check Rails etc. -	MT	509.94
171333	(c) PSC sleepers except Turnout PSC sleepers	MT	432.31
171334	(d) Turnout PSC sleepers	MT	423.69
171335	(e) Wooden / Steel / CI sleepers	MT	275.68
171336	(f) P.Way fittings of all types and other similar loose items	MT	314.55
171340	Relocating existing P.Way materials and stacking these neatly within lead of 1000 metre and free lift of 5 metre in a neat and countable manner, complete and as directed by the Engineer in-charge for -		
171341	(a) Rails	MT	373.62
171342	(b) PSC Sleepers	MT	280.96

Item No.	Description	Unit	Rate (Rs)
171350	Restacking Rails and Girders available in working area by leading the same away from working area, duly loading by mechanical means and stacking at specified location in a neat and countable manner including Loading, Leading & Stacking within station yard involving maximum lead of 1000 metre and lift upto 5 metre including other incidental charges etc.	MT	442.38
171360	Restacking boulders available in working area by leading the same away from working area, duly loading by mechanical means and stacking at specified location in a neat and countable manner including Loading, Leading & Stacking within station yard involving maximum lead of 1000 metre and lift upto 5 metre including other incidental charges etc.	Cum	204.62
171370	Leading out temporary girder with Railway's dip lorry under traffic block period including loading, leading and unloading the same by contractor's men & materials, erection of temporary staging aside track at loading and unloading points clear of running trains. (All labour & materials to be arranged by contractor and Dip Lorry, steel cribs & wooden sleepers to be supplied by Railway free of cost) -		
171371	(a) For lead upto 250 metre, Lift of 5 metre and crossing of one running track	MT	704.64
171372	(b) Extra to Item no. 171371 for additional lead of every 1 Km or part thereof beyond 250 metre, as directed	MT / KM Lead	207.00
171380	(c) Extra to Item no. 171371 for crossing of each additional running track beyond one track, as directed	MT / Track Crossing	258.59
171390	(d) Extra to Item no. 171371 for additional lift beyond 5 metre for each 1 metre lift or part thereof, as directed	MT / 1 metre Lift	184.82

CHAPTER - 18 : Level Crossings			
Item No.	Description	Unit	Rate (Rs)
1. Dismantling of Level Crossings :			
181010	Opening of level crossing upto required width from centre line of track for replacement of existing sleepers with PSC sleepers including dismantling pucca road surface and removing of ballast, muck etc., screening of ballast & stacking the same near level crossing and disposing of all debris at the location, as directed by		
181011	(a) With existing PSC sleeper	Sqm	304.42
181012	(b) With existing Wooden / Metal sleeper	Sqm	338.03
181020	Digging road surface at all types of level crossing surface, removing spoils upto bottom of sleepers and refilling soil to original level by proper ramming and		
181021	(a) With existing PSC sleeper	Sqm	467.62
181022	(b) With existing Wooden / Metal sleeper	Sqm	326.08
181023	(c) Extra to Item no. 181021 or 181022 for level crossing with precast concrete blocks	Sqm	53.47
181030	Dismantling existing check rail, blocks, bolts & nuts and stacking these in a countable manner, as directed	Running Metre	216.80
181040	Dismantling exiting Rail Height Gauge carefully, as directed by engineer in-charge including removal of cement concrete foundation and making surface clean	Each	2704.23
181050	Dismantling existing lifting barrier alongwith winch assembly and other components like boom, fringes, locking arrangements, pedestal, boom rest, locking rods/wires, pulley stakes, turn out wheels, 'A' base and other materials connected with functioning of lifting barrier without any damage including demolishing concrete base of existing structures and clearing debris in a neat and countable manner and clear of infringements, as directed (barriers on both sides of	Set	13919.60
181060	Dismantling existing lifting barrier and other components except winch assembly, like boom, fringes, locking arrangements, pedestal, boom rest, locking rods/wires, pulley stakes, turn out wheels, 'A' base and other materials connected with functioning of lifting barrier without any damage including demolishing concrete base of existing structures and clearing debris in a neat and countable manner and clear of infringements, as directed (barriers on both sides of	Set	12884.60
181061	Deduction to item no. 181060 for not dismantling 'A' base and its foundations	Set	2072.30
181070	Dismantling existing BG wicket gate / swing gate consisting of two leaves with gate posts, meeting post and stopper post etc. without causing any damage to material and stacking the same, as directed	MT	1246.37
2. Overhauling Of Level Crossings :			
181080	Overhauling of level crossing including digging out upto 50mm below sleeper, screening of shoulder & crib ballast, making good ballast with Railway's ballast from stacks / heaps, replacing worn out fittings & fastenings, check rails including scrapping of rails and tarring with two coats with contractor's coal tar etc., filling back ballast, ramming & levelling road surface and fixing concrete slabs excluding coal tarring of road, as		
	Broad Gauge :		

Item No.	Description	Unit	Rate (Rs)
181081	(a) Level crossings with asphalted road surface	Sqm	701.54
181082	(b) Level crossings with concrete blocks road surface	Sqm	673.07
181083	(c) Level crossings with any other type of road surface	Sqm	616.15
	Metre Gauge :		
181084	(a) Level crossings with asphalted road surface	Sqm	585.16
181085	(b) Level crossings with concrete blocks road surface	Sqm	542.46
181086	(c) Level crossings with any other type of road surface	Sqm	514.00
181090	Annual maintenance of various assets at level crossing, e.g. lifting barrier assembly, boom locking arrangement with ground lever frame, winch etc., as directed by engineer in-charge. Scope of work includes – (1) Adjustment of adjusters; (2) Cleaning & oiling greasing of dust/rust of pulleys and levers; (3) Claening of check rail clearance and rope channels; (4) Repairing of pot holes of road surface	Each	22393.95
	3. Check Rail Related Works :		
181100	Drilling of parabolic shaped holes to the web of check rail as per drawings & specifications and as directed by engineer in- charge	Each	123.01
181110	Fabrication (including cutting & bending) and fixing of check rails of all sections as per Railway's approved drawings & specifications for level crossings / trolley paths, duly cutting rail flanges, wherever required to correct alignment and level with Railway's rail, fittings & fastenings, drilling of holes in check rails with all fittings, e.g. rail screws / grip expansion bolts, brackets, packing pieces, bolts, washers etc. and as directed by the	Running Metre	822.00
181120	Fabricating (cutting and machining) check rails of all sections as per drawing and directions of engineer in-charge with all contractor's labour, tools and materials complete. Rails shall be supplied by Railways		
181121	(a) For rails of 90 UTS and above	Running Metre	957.72
181122	(b) For rails of 72 UTS	Running Metre	872.55
181130	Cutting foot of rail by gas or any other approved method for check rails with contractor's tools & plants	Running Metre of Gas Cut	158.03
181140	Manufacture & supply of stoppers & other accessories, such as grip expansion bolts, brackets, packing pieces, bolts etc. as per standard drawing for fixing check rail at level crossing	Each	356.42
181150	Fixing check rails on level crossings with MS brackets, MS packing plates, bolts & nuts, spring washers etc. as per approved drawing & specifications, as directed. Rails, MS brackets, packing plates, bolts & nuts, spring washers will be supplied by Railways	Each Level Crossing	4026.73
	4. Painting Works :		
181160	Painting of running rails and check rails with approved bituminous paint (RDSO's Specification no. M&C/PCN/120-2011), duly cleaning running rail and	Running Metre	26.49
181170	Providing 1:6 sand bituminous mix (Hot mix) on pre-cast slab joints duly levelling edges of slab and packing / grouting as required on level crossing portion with all labour and material by contractor.	Sqm	888.03
181180	Painting speed breakers with paint of approved quality & colour over the Bituminous surface near approaches to level crossing, as directed -		
181181	(a) With Normal paint (two coats)	Sqm	121.73

Item No.	Description	Unit	Rate (Rs)
181182	(b) With Hot melt thermoplastic road marking paint	Sqm	147.10
	5. Fencing And Gate Boom Related Works :		
181190	Dismantling existing rail hurdle fencing including removal of base concrete and stacking released materials in a neat and countable manner clear of infringements from the track, removing debris clear of site alongwith disposing debris, as directed by engineer in-charge within free lead of 250 metre & lift upto 5 metre complete with all labour, tools & plants by	Running Metre	74.78
181200	Providing rail hurdle fencing on all four sides of level crossing approaches / platforms for a length of 15 m (approx.) on each side with vertical rails fixed duly embedded in Cement Concrete foundation at 3 metre interval and two horizontal rails {overall height of fencing being at 1.0 metre (approx.) above ground level}. Item includes cutting rails and drilling holes as required, assembling necessary accessories to required length, painting fencing with two coats over one coat of primer with paint of approved quality & colour with all leads & lifts etc. complete and as directed. {Note : (1) All labour, materials and tools & plants to be arranged by contractor; (2) Rails of required section and overall length will be supplied by Railway within free lead of 250 metre. (3) Excavation and concrete work for foundation will be paid separately}	Running Metre	130.31
181210	Dismantling existing Rail Post including demolishing base concrete and stacking released materials within free lead of 250 metre at location including clearing of debris, as directed by engineer in-charge	Each Post	129.76
181220	Fixing Rail Posts at locations shown in relevant Drawing including earthwork / excavation for foundation, fixing rail posts in cement concrete of 30cm x 30cm x 30cm size and painting posts with two coats with paint of approved quality & colour, clearing area and preparing surface area of posts within 250m lead and lift of 5 metre complete, as directed {Note : (1) All labour, materials and tools & plants to be arranged by contractor; (2) Rails of required section and overall length will be supplied by Railway within free lead of 250 metre. (3) Excavation and concrete work for foundation	Each Post	485.30
181230	Providing Rail Height Gauge at approaches of level crossings as per approved drawings in cement concrete foundation using Railway's rails of all sections including cutting, bending, drilling holes, erecting in position with clamps, bolts & nuts including painting with one coat of enamel paint of specified colour over one coat of primer. {Note : excavation and concrete work will be paid		
181231	(a) Less than 5 metre width of level crossing	Each	6580.30
181232	(b) Above 5 metre width of level crossing	Each	8029.30

Item No.	Description	Unit	Rate (Rs)
181240	Manufacture, supply, assembly, erection, commissioning and testing of Lifting Barrier assembly, having fragmented boom, boom light boxes with suitable gate lamps, bell, boom supports (stay wires) with adjusters, counter weight, pedestal and lock posts with foundation of 'A' type as required, turn-union wheel with brackets, balance and auxiliary weights clamps etc. to approved standard drawing nos. SA 7973 to 7980 with all fittings and fastenings complete with contractor's men, equipments and materials, as per specifications and as directed (this item is excluding fringes) -		
181241	(a) Upto 6m long Lifting Barrier	Set	110424.15
181242	(c) Above 6m and upto 8m long Lifting Barrier	Set	130656.10
181243	(c) Above 8m and upto 10m long Lifting Barrier	Set	150781.10
181250	Manufacture, supply, assembly, erection, commissioning and testing of Winch Arrangement for operation of level crossing lifting barriers, as per RDSO's approved layout, having standard covering arrangement, foundation of 'A' type as required and pulleys, pulley guides & stakes, horizontal rope wheel, vertical rope wheel, wire adjusting screws, wire ropes 6 x 6 x 19 with all fittings, fixtures & accessories to RDSO's approved drawings with all parts including painting of steel work as per specification, as directed with cement concreting complete {Excavation and	Each	32630.10
181260	Manufacture, supply, assembly, erection, commissioning and testing of auto boom locking arrangement for existing lifting barriers, consisting of interlocking ground frame near gate lodge, foundation of 'A' type, as required and connecting ground frame to lock posts of gate booms with stipulated rodding on guide rollers, supported on trestles including required excavation, foundation, providing RCC NP-2 Class pipes of 100mm dia. for road / rail crossing, as per RDSO's drawings complete {Excavation, concrete work		
181261	(a) Single lever	Each	15875.75
181262	(b) Double lever	Each	22098.40
181270	Manufacture, supply and replacement of Railway's lifting barrier assembly of one side at level crossing & fixing it on boom supports, painting iron works with two coats of synthetic enamel paint over one coat of red lead primer of approved quality & colour and setting lifting barrier for smooth operation complete and as directed	Each	61328.35
181280	Manufacture, supply and replacement of Railway's lifting barrier assembly and boom supports, gate lamps at one side of level crossing including required excavation & concreting foundation of 'A' type, as required for pedestal bases, duly cutting rails, wherever necessary including painting iron works with two coats of synthetic enamel paint of approved quality and colour over one coat of red lead primer of approved quality, setting lifting barrier for smooth operation complete and as directed. {Excavation & concrete work will be paid separately}	Each	66616.05
	6. Miscellaneous Items :		

Item No.	Description	Unit	Rate (Rs)
181290	Manufacturing, supplying and laying at specified locations factory made CC block pavers for road surface of level crossings to RDSO Drg.No. M.00003, manufactured using 20mm size graded hard stone aggregates of approved quality with all contractor's cement, labour, tools/plant and curing with all lead & lift as per specifications and as directed by Engineer in-charge :		
181291	80mm thick blocks of M-35 grade for medium traffic	Sqm	782.07
181292	120mm thick blocks of M-40 grade for heavy traffic	Sqm	1179.90
181300	Fixing of Railway's precast concrete slabs of different sizes in position for level crossings / trolley path and filling gap between check rail / running rail, slabs, approaches etc. with asphalt complete and as directed	Sqm	114.86
181310	Paving of level crossing road surface with Railway's precast RCC slab / blocks as per standards / approved drawings for light and heavy vehicles, supplied on bed of sand, moorum or gravel, duly compacted and joints filled with mixture of sand & tar/bitumen in proportion of	Sqm	171.23
181320	Removal of RCC slab in existing level crossing portion and in between tracks alongwith stacking them in countable manner, as directed.	Sqm	38.93
181330	Provision of speed breaker on approaches of level crossings with pre-cast concrete blocks (M-25) of parabolic shape for entire road width with 125 mm central rise, 2m wide in the middle including painting two coats with paint of approved quality and colour	Running Metre	293.71
181340	Provision of one Asphalt Speed Breaker Rumble Strip on each side of the approaches of manned level crossings as per approved drawing including painting two coats with paint of approved quality and colour	Running Metre	488.25
181350	Manufacture & supply of tested GI wire rope of 6mm dia. and 6 ply to suit lifting barrier gates at nearby P.Way Stores / Depot / Level Crossing gate, as directed	Kg	200.10
181360	Supplying and fixing of Boom Supports (stay wires) for lifting barrier (approx. 8mm dia.) with suitable adjuster and other specials, as directed	Each	1141.09
181370	Manufacture and supply of vertical / horizontal Turnout Wheels and Shafts, mounted over base plate weighing not be less than 6 Kg with supporting vertical base, made of MS angle 75mm x 75mm x 10mm as per Railway's approved drawings and specifications	Each	1000.50
181380	Manufacturing and supplying to site of work including installation pulley with pulley stakes complete, wire rope 6 x 6 x 19 with accessories as per Railway's approved drawings for operation of lifting barriers complete, as	Each	357.54
181390	Fabrication, supply and fixing of Fringes to the lifting barriers of various length at level crossing as per approved drawing; made of MS flat of size 30mm x 6mm in 2 rows, 40mm x 6mm in 1 row horizontally and MS flat of size 30mm x 6mm vertically at 500mm centre to centre, painting iron works with two coats of synthetic enamel paint of approved quality & colour over one coat of red lead primer of approved quality, as directed	Running Metre	564.83

Item No.	Description	Unit	Rate (Rs)
181400	Supplying and driving into ground 'C' class G.I. pipes of 20mm dia. x 150mm length for planting red flags and lamp at 5 metre from centre of road at level crossings with all leads & lifts {cost of G.I. pipes to be paid	Each LC	610.08
181410	Manufacturing & supplying to site of work and installing Turnout wheel - Horizontal Rope Wheel - double wire (2-way) including guides with all contractor's materials, fabrication, labour, T&P, consumables, all leads & lifts etc. complete as per approved drawing and as directed by Engineer in-charge	Each	1518.52
181420	Supplying galvanized Steel Wire Rope for DW signalling 6 x 19 ply as per IRS No. S.11 amended upto date for lifting barrier at level crossing gates, as directed by Engineer in-charge	Kg	201.25
181430	Provision of Emergency Chain Posts for level crossings as per Annexure 9/2 of Para 905 of IRPWM, duly cutting rail to suitable length & drilling holes, providing hooks & links / rings with necessary locking arrangements to fix emergency chain, duly excavating pit and fixing rail posts in vertical position, concreting base with cement, base painting two coats with paint of approved quality & colour over one coat of primer complete, as directed. {Note : (1) Rails & chain will be supplied by Railways, (2) Excavation and concrete work will be paid	Each Post	591.42
181440	Fabrication, supplying and fixing Stop Boards of 600mm dia. to lifting barriers approved drawing, made of 3mm thick plate, using MS clamps, providing 6 nos. of 50mm dia. red reflector on stop board, painting iron works with two coats of synthetic enamel paint over one coat of red lead primer of approved quality & colour and writing STOP mark over the board	Each	1570.04
181450	Manufacturing, supplying and fixing Wicked Gate of size 1025mm x 1025mm x 1000mm at manned level crossings, as per approved drawing including painting with 2 coats of specified enamel colour paint over 1 coat of primer including earthwork in excavation etc. complete, as per specifications and as directed	MT	59159.07
181460	Providing rail reference posts by cutting rails of length for 60cm above & 30cm below ground level, excavation for foundation, fixing post in foundation in cement concrete base of size 0.3m x 0.3m x 0.6m in 1:3:6 mix, painting two coats with paint of approved quality & colour and marking, as directed {Note : (1) Rails will be supplied free by Railways in available length at nearest stores depot; (2) Excavation and concrete work will be paid separately}	Each	576.82
181470	Fixing of wooden blocks of approximate size of 150mm x 300mm x 1000mm on end of check rails at level crossings with contractor's labour, tools & plants and as		
181471	(a) With Railway's wooden block by cutting Railway's wooden sleepers (supplied free by Railways) into blocks by sawing to size	Each	209.85
181472	(b) With Contractor's hard wood block	Each	1040.64

CHAPTER - 19 : Bridge Related Activities			
Item No.	Description Of Item	Unit	Rate (Rs)
	1. Dismantling Works :		
191010	Dismantling existing track on girder bridges including running rails and guard rails, duly removing rails & fastenings, sleepers & fastenings, foot path slabs etc. duly cutting existing SW panels / LWR, if required into free rails of not less than 12 metre length, complete and as directed :		
191011	Broad Gauge Track	Track Metre	505.82
191012	Metre Gauge Track	Track Metre	454.02
191020	Removing existing small span steel girder / rail nest / slab / hume pipe (upto 6.50 m span) from track during line block / traffic-free period and stacking released materials, as directed and filling earth in Bridge location including compaction so as to allow traffic, dumping fresh ballast (from nearby stacks within 50 m lead), boxing, packing etc., duly linking permanent way to make the track fit for running of train at restricted speed of 20 kmph, complete and as directed. The work will be done under traffic block under Railway's supervision (Earthwork to be paid seperately) :		
	Broad Gauge Track -		
191021	For Clear span upto 3.05 metre	Each	10052.15
191022	For Clear span above 3.05 metre	Each	14767.15
	Metre Gauge Track -		
191023	For Clear span upto 3.05 metre	Each	7694.65
191024	For Clear span above 3.05 metre	Each	12122.15
191030	Insertion of temporary / steel girder in place of formation – The work involves : 1. Insertion of C/C crib or wooden crib at both ends as per Railway's design and materials in separate traffic blocks. This includes dismantling of track (if required), removal of ballast, excavation, installation of crib and filling of earth filled in bags, as required; 2. Excavation for insertion of girder, if required, filling back by bags full of earth under traffic block (if required); 3. Placement of girder by contractor's tools & plants and linking of track with the approaches including ensuring gauge & cross level to make track fit for 20 kmph, as directed by engineer in-charge. (In case bridge timber / channel sleepers are required to be laid on girder, the same shall be paid separately) -		
	(1) By Manual Method (By Slewing) :		
191031	Upto clear span of 10 metre	Each	20169.85
191032	Clear span above 10 metre and upto 15 metre	Each	28012.85
191033	Clear span above 15 metre and upto 20 metre	Each	36323.90
	(2) By Road Crane :		
191034	Upto clear span of 10 metre	Each	18214.85
191035	Clear span above 10 metre and upto 15 metre	Each	24562.85
191036	Clear span above 15 metre and upto 20 metre	Each	31378.90

Item No.	Description Of Item	Unit	Rate (Rs)
191040	Removal of temporary / steel girder and linking of track – The work involves : 1. Removal of Steel / RH girder (including crib on both ends) and placing it on crib / cess away from Railway track as directed by engineer at site under traffic block; 2. Filling of Railway's earth by ramming, pulling ballast from stack / adjoining track / same track, laying track, linking with approach track and packing of ballast, so as to open rack at 20 kmph speed, boxing & dressing of cess, ballast profiling etc. {(1) Work to be done under traffic block, (2) If earth is to be brought by contractor, the same will be paid separately}		
	(1) By Manual Method (By Slewing) :		
191041	Upto clear span of 10 metre	Each	19134.85
191042	Clear span above 10 metre and upto 15 metre	Each	26977.85
191043	Clear span above 15 metre and upto 20 metre	Each	35288.90
	(2) By Road Crane :		
191044	Upto clear span of 10 metre	Each	16144.85
191045	Clear span above 10 metre and upto 15 metre	Each	24045.35
191046	Clear span above 15 metre and upto 20 metre	Each	32413.90
191050	Dismantling of all types of existing track duly removing rails & fastenings, sleepers & fastenings, removing and stacking ballast upto formation level for bridge related works during Traffic Block, and relaying of same track by pulling additional ballast from stack / adjoining track / same track and linking it with approach track including packing, boxing & dressing etc., as directed so as to open track at 20 kmph speed		
191051	Broad Gauge Track	Track Metre	8228.40
191052	Metre Gauge Track	Track Metre	6674.38
	2. Linking of Track Over Girders :		
191060	Placement of Railway's RCC / PSC slab on bridge abutments / piers / staging etc. with contractor's crane, labour, tools & plant etc. complete, as directed and as per approved drawings & scheme		
191061	(a) Upto 5 MT	Each	6851.70
191062	(b) More than 5 MT & upto 10 MT	Each	8457.10
191063	(c) More than 10 MT & upto 20 MT	Each	12261.30
191064	(d) More than 20 MT & upto 30MT	Each	22949.40
191065	(e) More than 30 MT	Each	45569.90
191070	Removing from track the existing Wooden sleepers with fittings in running track conditions for TBTR (Through Bridge Timber Renewal) / ISD (Increasing Sleeper Density) works & stacking the same neatly at specified places with contractor's tools & labour, as directed by Engineer in-charge (For ISD work, only identified unserviceable sleepers to be covered)	Each	175.53
191080	Inserting in track Wooden sleepers, lying along cess / formation / slope / toe with all fittings complete for TBTR / ISD work to specified gauge with contractor's tools including aligning, levelling to make track fit for 20 kmph speed and as directed by Engineer in-charge	Each	200.39
191090	Removing from track existing Channel sleepers with fittings in the running track conditions for TBTR / ISD works & stacking the same neatly at specified places with contractor's tools & labour, as directed by Engineer in-charge (For ISD work, only identified unserviceable sleepers to be covered)	Each	210.41
191091	Extra to item no. 191090 for Track Circuited area	Each	12.95

Item No.	Description Of Item	Unit	Rate (Rs)
191100	Inserting in track Steel Channel sleepers, lying along the cess / formation / slope / toe with all fittings complete for TBTR / ISD work to specified gauge with contractor's tools including aligning, levelling to make track fit for 20 kmph speed and as directed by Engineer in-charge	Each	240.13
191101	Extra to item no.191100 for Track Circuited area	Each	24.73
191110	Linking of track on Bridge with Wooden sleepers as per approved drawing alongwith fittings, fixing running rails & guard rails including required notching, drilling of holes etc., as directed and making track structure fit for normal speed. (Rails, wooden sleeper and fittings will be supplied by Railways)		
191111	Broad Gauge Track	Track Metre	801.25
191112	Metre Gauge Track	Track Metre	723.48
191120	Linking of track on Bridge on Steel Channel sleepers as per approved drawings alongwith fittings, fixing running rails & guard rails including required notching, drilling of holes etc., as directed and making track structure fit for normal speed. (Rails, steel channel sleeper and all fitting will be supplied by Railways)		
191121	Broad Gauge Track	Track Metre	841.86
191122	Metre Gauge Track	Track Metre	719.05
	3. Casual Renewals Works :		
191130	Renewal of isolated bridge timber with Railway's bridge timbers after sizing, dressing, notching, making holes for hook bolts and end binding with contractor's 6 mm wire including removal & re-fixing of guard rails, as required in running track and painting of girder at timber seats with contractor's paint of approved quality by two coats, including fixing of all fittings, leveling, gauging etc. -		
191131	Broad Gauge Track	Each	758.07
191132	Metre Gauge Track	Each	682.17
191140	Replacement of isolated Steel Channel sleepers during traffic block as per approved drawing alongwith fittings, re-fixing running rails & guard rails including required notching, drilling of holes etc., as directed and making track structure fit for normal speed. (Steel channel sleeper and all fittings will be supplied by Railways) -		
191141	Broad Gauge Track	Each	1309.63
191142	Metre Gauge Track	Each	1143.00
191150	Replacement of running rail and guard rails on bridge portion over Wooden / Steel Channel sleepers, duly fixing fastenings as per approved drawings with suitable bolts, clips etc. including drilling of holes as per drawing with all leads & lifts complete and as directed. (Rails, packing plates and fitting will be supplied by Railways)	Track Metre	564.42
	4. Provision of Guard Rails Work :		
191160	Manufacture of flared portion of Guard Rail by cutting and bending to required shape & RDSO's approved drawings {Note : (1) Rails shall be supplied by Railways; (2) Rate is for one set, i.e. bending of two rails - left and right}	Each Set	6364.10
191170	Fixing of flared portion of guard rail including fixing of rail screws, fish plates, rubber or MS packing plate, as directed complete as per RDSO's approved drawing. (Rail screw, plate screw, fish plates etc. will be supplied by Railways)	Each Set	3511.53
191180	Drilling holes 25mm to 40mm dia. with drill twist in the foot of guard rails for fixing guard rails on bridge	Each	82.53

Item No.	Description Of Item	Unit	Rate (Rs)
191190	Drilling of 25mm to 40mm dia. holes in PSC sleepers with suitable rotary hammer / drilling machine at indicated location for fixing of guard rails on bridges & its approaches as per approved drawing and fixing of HDPE dowels to Drawing no. RDSO/T-3002, procured from RDSO's approved sources with contractor's epoxy resins, as specified	Each	224.44
191200	Making notches in guard rail of specified dimension to accommodate dog spike / rail screws / guard rail bolts for bridge timber / steel channel sleeper	Each	73.14
	5. Miscellaneous Items :		
191210	End binding of bridge timbers, wooden sleepers for plain track / points & crossings sleepers with contractor's 6 mm MS wire, lightly grooving the sleepers, tightening and binding, twisting of same wire driven into sleeper to hold end-binding in position, as directed	Each	106.86
191220	Fabrication & supply of Galvanized Steel Channel Sleepers made from ISMC 150mm x 75mm standard rolled section conforming to IS:2062 as per approved drawing complete and as directed	MT	136531.34
191230	Supply & replacement of old crushed rubber pads of 10mm thickness with 25mm thick new rubber pads alongwith fixing by proper adhesive on steel channel sleepers on bridges complete, as directed by Engineer In-charge	Per Sleeper	465.06
191240	Supplying & fixing MS chequered plates 8mm thick between guard rails on un-ballasted deck bridge for gang pathway, overlapping at regular intervals of 2m to 2.5m with rail screws or bolts duly drilling holes in chequered plate, as directed [Note : Overlapping of chequered plates shall not fall in between sleepers]	Kg	72.64
191250	Providing staging during traffic block to 4.0m x 3.5m x 3.0m approx. size using steel cribs and/or wooden sleepers as per RDSO's approved drawing, duly excavating earth in pit and driving rails / sleepers vertically to form shoring and filling gap with sand bags etc. complete, as directed. {Note : (1) Steel CC cribs, rails and wooden sleepers will be supplied by Railway; (2) Dismantling and linking of track will	Each	15236.35
191260	Fixing of Railway's gang-way / landing slabs without damaging slab edges with proper concrete packing and fixing with cement jointing in running traffic condition without block complete and as directed	Running Metre	559.82
191270	Providing temporary shoring arrangements to protect existing track structures, made of released rails at 1 metre or suitable intervals in vertical and horizontal directions, if required for a maximum height of 3 metre. Rail gap to be filled with wooden blocks of 15 cm thickness to retain earth with all leads & lifts, materials, tools & plants, as directed (Rail will be supplied by Railways)	Running Metre	2305.98
191280	Clearing waterway of major & minor bridges by removing weeds / shrubs / bushes, removing silt deposit, filling scours, if any upto 10 metre from centre of bridge including disposing waste and silt away from waterway (Rates are for a single line)	Per Metre Span	159.30

Item No.	Description Of Item	Unit	Rate (Rs)
191290	Fabrication, supplying and fixing 600mm x 450mm Bridge Board made from 16 SWG MS Sheet duly welded or rivited to back support of two 600mm long horizontal angles of size 25mm x 25mm x 3mm & two 2.5 metre long vertical support of MS Angle of size 50mm x 50mm x 5mm, welded / rivited to board. Vertical supports shall have split ends for proper fixing in ground. Vertical supports of board shall be embedded in ground in M 20 Cement Concrete blocks of size 300mm x 300mm x 300mm, complete job including painting & writing of subject matter on bridge board, as directed by Engineer - Incharge {Note : Excavation & concrete work will be paid separately}	Each	1893.13

CHAPTER - 20 : Supply of P.Way Items			
Item No.	Description Of Item	Unit	Rate (Rs.)
	1. Nuts & Bolts		
201010	Manufacturing and supplying Fish Bolts with Nuts of different sizes as per specifications etc. with all contractor's material, labour, tools & plants and machinery, all lead & lift etc. and as directed by the Engineer in-charge :		
201011	(a) Size 25mm x 130mm with nut & one plain washer to RDSO Drg. No. T-11501, conforming to latest IRS specification & alteration	Each	50.03
201012	(b) Size 25mm x 140mm with nut to RDSO Drg. No. T-1899, conforming to latest IRS specification & alteration	Each	54.63
201013	(c) Size 25mm x 150mm with nut to RDSO Drg. No. T-11510, conforming to latest IRS specification & alteration	Each	56.18
201014	(d) Size 25mm x 160mm with nut, one plain washer & one single coil spring washer to RDSO Drg. No. T-11511, conforming to latest IRS specification & alteration	Each	64.80
201015	(e) Size 25mm x 180mm with nut, one plain washer & one single coil spring washer to RDSO Drg. No. T-11513, conforming to latest IRS specification & alteration	Each	66.82
201020	Manufacture & supply of Bolts & nuts and spring washers (for fixing MS brackets) as per RDSO Drg. No. RDSO/T/11550 or T.11551 for bolt & nut and double coil spring washer as per RDSO Drg. No.RDSO/T/1214 (One set comprises of 1 bolt, 1 nut & 1 spring washer)	Kg	69.00
201030	Manufacture & supply of galvanised MS holding down bolts with nuts, having two coats of electro-plating 18mm to 20mm dia., 300mm long, one end threaded and other welded with 8mm dia. MS rods 100mm long perpendicular to the holding down bolt for holding Railway's AC bearing plates in pit line with all leads & lifts etc. complete and as directed	Kg	115.00
201040	Manufacture and supply of 25mm dia. bolts for points & crossing (with nut, single coil spring washer & plain washer) to RDSO Drg. No. T-11504 to T-11549 with latest Alt. & IRS Specification	Kg	55.20
201050	Manufacture and supply of Hook Bolt 28mm dia. & 320mm long as per RDSO Drg. no. BA-1636/IR2	Each	40.25
	2. Rubber Pads :		
201100	Manufacture & supply of Grooved Rubber Sole Plates (GRSP) as per RDSO Drg. from RDSO approved sources, as directed by the Engineer in-charge :		
201101	(a) GRSP as per Drg. No. RDSO/T-3711	Each	37.95
201102	(b) GRSP as per Drg. No. RDSO/T-3703	Each	34.50
201110	Manufacture & supply of Grooved Rubber Sole Plates (GRSP) for special layouts as per RDSO approved drawing from RDSO approved sources :		
201111	(a) For 1 in 12 Turnout sets as per RDSO Drg. No.T-4732	Set	16560.00
201112	(b) For SEJs as per RDSO Drg. No.T-4149	Each	161.00
201113	(c) For 1 in 8.5 Turnout sets as per RDSO Drg. No.T-4865	Set	13202.00
201114	(d) For Derailing Switches sets as per RDSO Drg. No.T-5836	Set	6126.05

Item No.	Description Of Item	Unit	Rate (Rs.)
201120	Manufacture and supply of 60 Kg Composite Grooved Rubber Sole Plate (CGRSP) to RDSO Drg. No.T-6618 for 60 Kg (UIC Rail) and conforming to IRS specification for Composite Grooved Rubber Sole Plate for placing beneath rails (Provisional-2006) No. RDSO/M and C/RP-198/2006 with amendments up to date (For service life of 300 GMT or 8 years, whichever is earlier)	Each	54.63
201130	Manufacture & supply of Grooved Rubber Pads to be used for steel channel sleepers for 60 Kg / 52 Kg running rails to RDSO drawing No. RDSO/T-5197 to 5200 and RDSO/T-5155 to 5160 with 52Kg / 90R guard rails from RDSO approved sources to IRS specification for grooved rubber pads (provisional 1989) for 10mm thickness with all contractor's lead, lift, labour, tools, plant and transportation etc. complete as instructed by Engineer in-charge {One set constitutes Two nos.}	Set	303.60
201140	Manufacture & supply of Elastomeric Pads 25mm / 30mm thick as per RDSO drawing No. B/1636//R2 to suit Insulated steel channel sleepers with all contractor's material, lead, lift, labour, tools, plant and transportation etc. complete as per approved drawings and as instructed by Engineer in-charge {One set of sleeper constitute two Nos.}	Set	349.60
	3. ERCs, Liners, Fish Plate, Joggled Fish Plate :		
201200	Manufacture and supply of Elastic Rail Clip-J, conforming to IRS specification No.T-31-92 with latest corrigendum as per Drg. No.T-4158 of RDSO with latest alteration	Each	54.05
201210	Manufacture & supply of Glass Filled Nylon (GFN-66) Liners as per RDSO Drg. from RDSO approved sources, as directed by Engineer in-charge :		
201211	(a) Liners to Drg. No.RDSO/T-3702	Each	9.20
201212	(b) Liners to Drg. No.RDSO/T-3706	Each	8.80
201213	(c) Liners to Drg. No.RDSO/T-3707 & 3708	Each Set	26.45
201220	Manufacture & Supply of Metal Liners as per RDSO Drg. from RDSO approved sources, as directed by Engineer in-charge :		
201221	(a) Liners to Drg. No. RDSO/T-3738	Each	26.45
201222	(b) Liners to Drg. No. RDSO/T-3740	Each	20.70
201223	(c) Liners to Drg. No. RDSO/T-3741 & 3742	Each Set	76.48
201230	Manufacturing and supplying Fish Plate of different sizes as per specification IRS/T-1 from RDSO approved sources with all contractor's material, labour, tools, all lead & lift etc. and as directed by the Engineer-in-charge :		
201231	(a) Fish Plate 60 Kg (1000mm long) to RDSO Drg. No. T-5916	Set	3942.20
201232	(b) Fish Plate 60 Kg (610mm long) to RDSO Drg. No. T-2434	Set	2272.40
201233	(c) Fish Plate 52 Kg (1000mm long) to RDSO Drg. No. T-5915	Set	3059.00
201234	(d) Fish Plate Combination 60Kg/52Kg RDSO T- 696 To T-699	Set	7072.50
201235	(e) Fish Plate Combination 52Kg/90R RDSO T- 1900 To T-1901	Set	4600.00
201240	Manufacturing and supplying Joggled Fish Plates of different sizes as per IRS /T-1 specification from RDSO's approved sources etc. with all contractor's material, labour, tools, plants, all lead & lift etc. and as directed by the Engineer in-charge		

Item No.	Description Of Item	Unit	Rate (Rs.)
201241	(a) Joggled Fish Plate (with bolt & nut) for use on defective welded joints for BG 60 Kg rail to RDSO Drg. no. T-5849	Set	2817.50
201242	(b) Joggled Fish Plate (with clamp and bolt & nut) for 52 Kg rail section to RDSO Drg. no. T-5551	Set	2875.00
201243	(c) Joggled Fish Plate (with bolt & nut) for use on defective welded joints for BG 52 Kg rail to RDSO Drg. No. T-5848	Set	2254.00
201244	(d) Joggled Fish Plate with 'C' Clamp for 60 Kg rail as per RDSO Drg. no. T-4016	Set	4025.00
201250	Manufacturing and supplying Galvanised MS Inner and Outer Clips for Steel Channel Sleeper (RDSO Drg. No. T-6150 & T-6151) {One set constitutes two inner & two outer clips}	Set	499.10
	4. Different Components Of Track :		
201300	Manufacturing and supplying Mild Steel clip for fixing guard rails on PSC sleeper as per RDSO Drg. No. RT-3083-3084	Set	138.00
201310	Manufacture and Supply of Spherical Washers to Drawing no. RDSO/T-023 (M) at Store of SE/P.Way complete and as directed	Set	45.71
201320	Manufacture and Supply of Single Coil Spring Washer T-10773 as per RDSO Drg. No. RT-4015 at Store of SSE/P.Way complete and as directed	Each	5.00
201330	Manufacturing & supplying SGCI insert to Drg. no. RDSO/T/381-R2, as directed by Engineer in-charge	Each set	103.50
201340	Manufacturing & supplying linked chain made of 8mm dia. rods with joints welded with links of length not exceeding 40mm with ring & bolt at one end and hook & locking arrangement at other end, painted with two coats of PO red paint of various length of 5.5 m to 11 m of approved quality, as directed	Metre	121.55
201350	Manufacturing and supplying MS / CI Bracket (at level crossing) as per Drg. no. RDSO/T/4151 or 4784 and CI Distance Bracket (at level crossing) as per Drg. no. RDSO/T/4152 or 4785., bolts & nuts, MS plates with contractor's materials, steel, labour, tools, plants and machinery with all lead & lift etc. complete and as directed by Engineer in-charge {Note : (1) Material shall conform to RDSO Specifications and as per latest RDSO drawings; (2) Materials shall be procured only from Railway / RDSO approved vendors; (3) Rates are inclusive of transportation of materials to site by contractor's own road vehicles including loading & unloading, as directed; (4) One set will comprise of MS/CI bracket, CI distance bracket, nuts & bolts for both sides check rails; (5) All above finished materials shall be supplied at SSE/P.Way/Stores or Depot}	Set	788.26
201360	Manufacture, supply & fixing of galvanised steel fittings of insulated galvanised steel channel sleeper for 60 Kg running rails & 52 Kg Guard Rail as per RDSO drawing no. RDSO/T-5155 to 5164 with up-to-date correction slips and specifications with all contractor's lead, lift, labour, tools, plant, transportation etc. complete as per approved drawings and instructions of Engineer in-charge	Set	2300.00
201370	Manufacture, supply & fixing of galvanised steel fittings of insulated galvanised steel channel sleeper for 52Kg running rails & 52 Kg/90R Guard Rail as per RDSO drawing no. RDSO/T-5197 to 5200 with up-to-date correction slips and specifications with all contractor's lead, lift, labour, tools, plant, transportation etc. complete as per approved drawings and instructions of Engineer in-charge	Set	1764.10

Item No.	Description Of Item	Unit	Rate (Rs.)
201380	Manufacturing and supplying Glued Joint as per specifications with all contractor's material, labour, tools, all lead & lift etc. and as directed by Engineer in-charge (Rails will be supplied free by Railways) :		
201381	(a) Glued Joint of 60 Kg rail to RDSO Drg. no. T-5843	Set	9890.00
201382	(b) Glued Joint of 52 Kg rail to RDSO Drg. no. T-5361	Set	8949.30
201390	Supply of D-Shackle 24mm x 28mm, as directed by Engineer in-charge	Set	448.50
	5. Engineering Indicators :		
201400	Manufacturing, fabricating and supplying retro-reflective sign boards, made of 2mm thick aluminum sheet or 3mm thick aluminium composite sheet, face to be fully covered with high intensity encapsulated type heat activated retro-reflective sheeting conforming to type-IV of ASTM-D4956-01 in yellow & black or other colour combination including subject matter, message, symbols, borders etc. as approved by Engineer In-charge or as per IRPWM guidelines, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class-2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back-support frame of M.S. angle iron of size 25mm x 25mm x 3mm alongwith theft resistant measures, mounted and fixed with 2 nos. M.S. angles of size 35mm x 35mm x 5mm to a vertical post made up of M.S. Tee section ISMT 50mm x 50mm x 6mm, back side of board shall be with non-peelable weather-proof paint, consisting of one coat of zinc chromate primer and two coats of epoxy paint. Vertical post shall have black & white anti-corrosive paint or powder coating complete, as directed		
201401	(a) Bilingual Whistle Boards for level crossing	Set	4579.16
201402	(b) Speed Breaker / Rumble Strips Board	Set	3583.31
201403	(c) Un-manned Level Crossing Danger Stop Board	Set	2925.95
201404	(d) Manned Level Crossing Indicator Board	Set	4136.41
201405	(e) Single Strip / Double Strip Level Crossing Road Warning Board	Set	2925.95
201406	(f) Caution Indicator Board	Each	4104.21
201407	(g) Speed Indicator Board	Each	3505.43
201408	(h) Stop Indicator Board	Each	4104.21
201409	(i) Termination Indicator Board	Each	5277.70
201410	(j) Flag Station Board	Each	3116.53
201411	(k) Circular Stop Disc of 600mm dia. with vertical holding stand for fixing on emergency chain at level crossing	Each	3008.40
201420	Manufacturing and supplying Trolley Refuge Indicator Boards / Level Crossing No. Boards, made of MS sheet of 2mm thick of size 240mm dia. and 50mm x 50mm x 6mm angle, welded to MS sheet, duly painting with 2 coats of ready mixed yellow enamel paint over one coat of red oxide with all lead & lift as per specification and as directed by Engineer in-charge	Each	856.75

Item No.	Description Of Item	Unit	Rate (Rs.)
201430	Manufacturing, supplying and fixing Curve Indicator / Point Indicator / SEJ Boards to be provided at various locations on formation, made out of MS sheet 2mm thick of size 450mm x 300mm duly fixed with MS frame of 25mm x 25mm x 3mm angle welded to 50mm x 50mm x 3mm MS angle, 1000mm long post split and bent 100mm at bottom end with all lead & lift as per specification and including painting of details with enamel paint, as directed by Engineer in-charge (Earthwork & concreting will be paid separately)	Each	651.82
	6. Small Track Machines :		
201500	Manufacturing and supplying Rail Cutting Machine (Saw type) for cutting of rails from RDSO approved sources and as per RDSO specification no. TM/SM/4, dated 24.04.1991	Each	42550.00
201510	Manufacturing and supplying Abrasive Rail Cutter for cutting of rails from RDSO approved sources and as per RDSO specification no. TM/SM/1 (Rev. 01 of 2007) (Amended on 09.09.2008)	Each	138747.50
201520	Supply of Cutting Disc for Abrasive Rail Cutter from RDSO approved sources and as per RDSO specification no. TM/SM/2 (Rev. 01 of 2007)	Each	920.00
201530	Supply of Hacksaw Blades size 300mm x 12.5mm x 0.63mm {18 TPI (Eighteen teeth per inch)} from RDSO approved sources and as per RDSO specification no. TM/SM/26 (Rev. 01 of 2004) or equivalent of approved brand as per direction of engineer in charge	Each	184.00
201540	Manufacturing and supplying Rail Drilling Machine for speedy drilling of holes. Machine shall be procured from RDSO approved sources and as per RDSO specification no. TM/SM/3 dated 24.04.1991	Each	42550.00
201550	Manufacture and supply of Drill Twist, made of High Speed Steel (HSS) of various sizes of Addison / I.T. make or equivalent, as directed by the Engineer in-charge		
201551	(a) 7.2 mm dia.	Each	494.50
201552	(b) 16 mm dia.	Each	619.85
201553	(c) 18 mm dia.	Each	632.50
201554	(d) 26.5 mm dia.	Each	747.50
201555	(e) 28.75 mm dia.	Each	856.75
201556	(f) 31.75 mm dia.	Each	920.00
201560	Manufacturing and supplying portable D.C. Welding Generator for resurfacing of points & crossings by hand welding and also for emergency lighting. Machine shall be procured from RDSO approved sources and as per RDSO specification no. TM/SM/20, dated 19.11.1992	Each	207000.00
201570	Manufacturing and supplying Rail Profile Weld Grinder with Generator for rail profiling. Machine shall be procured from RDSO approved sources and as per RDSO specification no. TM/SM/10, dated 16.08.1991	Each	80500.00
201580	Manufacturing and supplying Weld Trimmer for removal of extra metal from rail head by trimming A.T. Weld from RDSO approved sources. Machine shall be procured from RDSO approved sources and as per RDSO's Specification No. TM/SM/9, dated 16.08.1991	Each	120750.00
201590	Manufacturing and supplying Hydraulic Rail Tensor / Stressor for carrying out distressing from RDSO approved sources and as per RDSO specification no. TM/SM/32, dated 20.12.1991	Each	235750.00

Item No.	Description Of Item	Unit	Rate (Rs.)
201600	Manufacturing and supplying Hydraulic Track Jack non-infringing type of capacity 15 tonne from RDSO approved sources and as per RDSO specification no. TM/SM/31, dated 08.05.1996	Each	6325.00
201610	Manufacturing and supplying Mechanical Track Lifting Jack of different capacity from RDSO approved sources and as per RDSO specification no. TM/SM/21 of 2003 for -		
201611	(a) 8/10 tonne capacity	Each	8625.00
201612	(b) 15 tonne capacity.	Each	9775.00
201620	Manufacturing and supplying Portable Track Lifting and Slewing Device for lifting & slewing of track from RDSO approved sources and as per RDSO specification no.TM/SM/25 of 2004	Each	92000.00
201630	Manufacture & supply of Gauge cum Level precision instrument with spirit level transportation box from RDSO approved Firm at SSE/P.Way stores for -		
201631	(a) Broad Gauge as per RDSO specification no. TM-58 dated 11.06.2001	Each	2587.50
201632	(b) Metre Gauge as per RDSO specification no. TM-59 dated 29.06.2001	Each	2300.00
201633	(c) Narrow Gauge	Each	1840.00
201640	Manufacture & supply of P.Way Inspection Kit in proper cabinet with folding gauge from RDSO approved firm at SSE/P.way stores -	Each	13800.00
201650	Manufacturing & supplying Sensitive Spirit Level as per approved RDSO Drawing no. T-3254	Each	517.50
201660	Manufacture & supply of Magnetic Base type Rail Thermometer - Dial from RDSO approved sources at SSE/P.Way stores, as per RDSO specification no. TM-67, dated 28.01.2002 (Rev.01 of 2010)	Each	977.50
201670	Supply of RDSO approved Standard Rail Thermometer -		
201671	(a) Embedded Type	Each	1380.00
201672	(b) Magnetic Type	Each	977.50
201673	(c) Continuous Type	Each	23000.00
201680	Manufacturing and supplying Electronic Toe Load Measuring Device for toe load measurement of ERCs from RDSO approved sources, duly calibrated by RDSO and as per RDSO's Specification No. TM/SM/ETLMD/218 of 2003	Each	63250.00
201690	Manufacturing and supplying of Tongue for Toe Load Measuring Device from RDSO approved sources and as per latest technical specifications, issued by RDSO	Each	1150.00
201700	Manufacturing and supplying Self Propelled Light Inspection Trolley with pay load capacity of 300 kg (approx.) with speed potential upto 20 kmph. Manufacturer shall be RDSO approved firm and Trolley shall be as per RDSO specification no. TM/SM/28, dated 15.09.2010	Each	92000.00
201710	Manufacturing and supplying Powered Material Trolley for transporting materials to site of work. Pay load capacity shall be 1 MT (approx.) and speed potential shall be 30 kmph. Manufacturer shall be RDSO approved firm and Trolley shall be as per RDSO specification no. TM/SM/33 dated 06.06.1996	Each	230000.00
201720	Supply of B.G. Push Trolley complete with umbrella and bench, procured from RDSO approved source at SSE/P.Way's Store. Trolley shall be as per latest technical specification and drawing issued by RDSO	Each	43125.00

Item No.	Description Of Item	Unit	Rate (Rs.)
201730	Supply of B.G. Dolly of 10 MT capacity complete as per RDSO Drawings from RDSO approved Firm at SSE/P.Way's Store	Each	59800.00
201740	Supply of B.G. Rail Dolly complete, procured from RDSO approved sources at SSE/P.Way's Store. Dolly shall be as per latest drawing and technical specification issued by RDSO	Each	8050.00
201741	Supply of complete Wheel Assembly for BG Rail Dolly as per approved drawing	Each	1725.00
201742	Supply of Axle of Wheel for BG Rail Dolly	Each	230.00
201743	Supply of Wheel Drum for BG Rail Dolly	Each	575.00
201750	Manufacturing and supplying Light Weight (weighing upto 20 kg) Rail cum Road Trolley for carrying materials weighing upto 100 Kg. Trolley shall be procured from RDSO approved sources and equipment shall be as per RDSO specification no. TM/SM/16, dated 31.03.1992	Each	5520.00
201760	Manufacturing and supplying Gang tool box made either by riveting or welding of 16 SWG Mild Steel sheet and M.S. angle iron frame complete as per size and shape approved by Engineer In-charge. The box shall be painted with two coats of synthetic enamel paint applied over red oxide primer, as approved & directed	Kg	78.87
201770	Train Speed Recorder, as per RDSO's Specification no. TM/SM/TSR/221, dated 16.04.2004	Each	124775.00
	7. Welding Equipments :		
201800	Manufacture & supply of Steel Mould Shoes for SKV welding as per IR's AT Weld Manual :		
201801	(a) 52Kg - 2 piece Mould Shoe	Set	2760.00
201802	(b) 52Kg - 3 piece Mould Shoe	Set	3082.00
201803	(c) 60Kg - 2 piece Mould Shoe	Set	2990.00
201804	(d) 60Kg - 3 piece Mould Shoe	Set	3082.00
201810	Manufacture & supply of rail file approximate size 15" long for filing SKV welds from Railway approved firm	Each	517.50
201820	Manufacture & supply of Welding Equipments, as directed by Engineer in-charge :		
201821	(a) Welding Cable Copper (50mm ²)	Metre	126.50
201822	(b) Pressure Regulator for Oxygen Multi-stage cylinder	Each	1667.50
201823	(c) Pressure Regulator for Acetylene gas cylinder	Each	1667.50
201824	(d) 500amp Arc Welding Electrode Holder	Each	97.75
201825	(e) Gas Cutting Torch Blow Pipe	Each	1092.50
201826	(f) Hand Gloves Leather (Left Hand & Right Hand)	Set	36.80
201827	(g) Hose Rubber for Oxygen 6mm dia.	Metre	32.20
201828	(h) Hose Rubber for Dissolved Acetylene (D.A.) 6mm dia.	Metre	32.20
201829	(i) Welding Screen (approximate size 4" x 3")	Each	172.50
201830	Manufacture & supply of Gas Cylinders (returnable cylinders) with gas for repairing of check rails at level crossings and guard rails on bridges alongwith other works, as required :		
201831	(a) Oxygen Gas Cylinders (Pressure 1800 lbs to 2000 lbs)	Each	9200.00
201832	(b) Dissolved Acetylene (D.A.) Gas Cylinders with pressure of 15 Kg to 20 Kg	Each	5520.00
201840	Manufacture & supply of wire brush 25mm long, as directed by Engineer in-charge	Each	17.25
201850	Supply of Used Lubricating Oil of approved quality	Litre	11.50
	8. USFD Related Items :		

Item No.	Description Of Item	Unit	Rate (Rs.)
201900	Manufacture & supply of Ultrasonic Digital Single Rail Tester, capable of working with 230 ± 10 volt AC supply or battery operated from RDSO approved company, conforming to RDSO's Specification no. RDSO/M&C/NDT/128/2007	Each	641700.00
201910	Manufacture & supply of Ultrasonic Digital Double Rail Tester, capable of working with 230 ± 10 volt AC supply or battery operated from RDSO approved company, conforming to RDSO's Specification no. RDSO/M&C/NDT/130/2007	Each	1006250.00
201920	Manufacture & supply of Digital Ultrasonic Testing Equipment and its essential accessories for detection of flaws in welded rail joints, i.e. Alumino-Thermic (AT), Flash-Butt (FB) and Gas Pressure (GP) welded rail joints. Equipment shall be capable of detecting flaws, finding their location and storing A-scan signals obtained in joints of rail sections during ultrasonic testing of welded rail joints. Manufacturer shall be RDSO approved firm and equipment shall be as per RDSO's technical specification no. M&C/NDT/129/2005	Each	297505.00
201930	Manufacture & supply of spares for USFD Testing Equipment :		
201931	(a) 0 degree 4 MHz Double Crystal PZT Probe - 18mm dia. for rail testing	Each	3565.00
201932	(b) 0 degree 2 MHz double Crystal PZT Probe - 18mm dia. for AT weld testing with BNC connector	Each	2209.15
201933	(c) 70 degree 2 MHz (F+B) Single Crystal PZT Center Probe - 20mm x 20mm square for rail testing	Each	3754.75
201934	(d) 70 degree 2 MHz (F+B) Single Crystal PZT GFC Probe - 20mm x 20mm square for rail testing	Each	3680.00
201935	(e) 70 degree 2 MHz Single Crystal PZT Hand Probe - 20mm x 20mm square for AT weld testing with BNC connector	Each	2789.90
201936	(f) 45 degree 2 MHz Single Crystal PZT Hand Probe - 20mm x 20mm square for AT weld testing with BNC connector	Each	2789.90
201937	(g) 14.8 Volts / 7 Ampere Hour, Lithium Rechargeable Maintenance-free Battery Pack	Each	14375.00
201938	(h) Battery Charger cum Main Power Pack with charge status indicator and power chord, Input 110-260 V AC, 50-60 Hz	Each	16675.00
201939	(i) BNC Double End Connector with a co-axial cable of length 3 metre	Each	431.25
201940	Manufacture & supply of 70 degree 2 MHz Single Crystal PZT Probe in pair of 20mm x 20mm square side looking probe (SLP) with BNC connector	Each	7475.00
201950	Manufacture & supply of 70 degree 2 MHz (F+B) single crystal PZT Non-gauge Face Side Probe - 20mm x 20mm square for rail testing	Each	3795.00
201960	Manufacture & supply of Tandem Test Rig with two 45 degree Probes for AT weld testing	Each	12075.00
201970	Manufacture & supply of spares for Digital SRT USFD Machine :		
201971	(a) Complete Trolley Carriage Assembly	Each	22425.00
201972	(b) Complete Trolley Sub-assembly of Central Probe Housing	Each	10350.00
201973	(c) Complete Trolley Sub-Assembly of Gauge Face Probe Housing	Each	2875.00
201974	(d) Complete Trolley Wheel Assembly	Each	5750.00
201980	Manufacture & supply of spares for Digital DRT USFD Machine :		
201981	(a) Complete Trolley Carriage Assembly	Each	26450.00
201982	(b) Complete Trolley Sub-assembly of Central Probe Housing	Each	9775.00

Item No.	Description Of Item	Unit	Rate (Rs.)
201983	(c) Complete Trolley Sub-Assembly of Gauge Face Probe Housing	Each	4600.00
201984	(d) Complete Trolley Wheel Assembly	Each	10350.00
201990	Manufacture & supply of Standard Rail Test Piece with artificial defects, made by EDM (Electric Discharge Machine) System alongwith wooden stand for sensitivity setting of SRT as per IR's Manual of Ultrasonic Testing of Rails and Welds, revised 2006 with latest Correction Slips (New 60 Kg/52Kg rail piece of ½ meter length shall be supplied by Railway)	Each	30475.00
202000	Manufacture & supply of Standard Rail Test Piece with artificial defects, made by EDM (Electric Discharge Machine) System alongwith wooden stand for sensitivity setting of DRT as per IR's Manual of Ultrasonic Testing of Rails and Welds, revised 2006 with latest Correction Slips (New 60 Kg/52Kg rail piece of ½ meter length shall be supplied by Railway)	Each	57500.00
202010	Manufacture & supply of Standard AT Weld Test Piece with artificial defects, made by EDM (Electric Discharge Machine) System for sensitivity setting of AT Weld Tester as per IR's Manual of Ultrasonic Testing of Rails and Welds, revised 2006 with latest Correction Slips (New 60 Kg/52Kg weld piece of sufficient length shall be supplied by Railway)	Each	17250.00
9. Miscellaneous Items :			
202100	Manufacture & supply of Anti-corrosive Bituminous Paint (Black) ready mix paint conforming to IS:9862-1981	Litre	92.00
202110	Manufacture & supply of Enamel Paint all shades as per RDSO Specification No. M&C/PCN/120-2011	Litre	161.00
202120	Manufacture & supply of Aluminum Paint as per RDSO Specification No. M&C/PCN/120-2011	Litre	149.50
202130	Manufacture & supply of Red-oxide ready-mix Paint to IS : 2074 of reputed make	Litre	92.00
202140	Manufacture & supply of Grease Graphite Grade 'O' of IS:408-1981	Kg	230.00
202150	Manufacture & supply of painting brush of difference size :		
202151	(a) 25 mm width	Each	46.00
202152	(b) 50 mm width	Each	57.50
202153	(c) 75 mm width	Each	69.00
202154	(d) 100 mm width	Each	86.25
202160	Manufacture & supply of Mild Steel Core Wire Rope required for unloading Rail panels :		
202161	(a) Wire Rope with both ends eye & crimping – 20mm dia.	Metre	230.00
202162	(b) Wire Rope with both ends eye & crimping - 25mm dia.	Metre	316.25
202163	(c) Wire Rope with both ends eye & crimping - 50mm dia.	Metre	575.00
202170	Manufacture & supply of Tri Colour Hand Signal Torch / Lamp 190mm x 80mm x 120mm	Each	172.50
202180	Manufacture & supply of Keyman's Pitthu (Hatch-back) Bag of size 30cm x 40cm x 20cm with weight 0.860 Kg, made of super quality canvas cloth having four pockets	Each	2530.00
202190	Manufacture & supply of Safety Jacket with high glow reflective EN-471 tapes stitched and laminated on glow / florescent orange / yellow industrial Cloth / Net {Tech. Spec. - Net 100% Polyester, Fabric 65%+35% Polyester Cotton & Reflective tape gloss Beads/Presmatic as per EN-471}	Each	2645.00

Item No.	Description Of Item	Unit	Rate (Rs.)
202200	Manufacture & supply of orange colour Shirt / T-Shirt for Trackmen with Polyester Cotton Sinker Fabric, 52% polyester blending, GSM (200 in ready form & 170 on order) with matching collar & tape as directed by engineer in-charge for -		
202201	Half sleeves Shirt / T-Shirt	Each	345.00
202202	Full sleeves Shirt / T-Shirt	Each	460.00
202210	Manufacture & supply of Industrial Safety Helmet with facility for attachment of miner's light for use by Trackmen etc. Helmet shall be made of high impact, heat & chemical resistant HDPE polymer with 6 point adjustable and comfortable head harness alongwith high absorption & washable sweatband. Also, chin strap to helmet with special brim design shall be made of high tensile nylon conforming to IS:2925-1984. Helmet shall be ISI marked and from NSIC registered manufacturer.	Each	920.00
202220	Manufacture & supply of Rechargeable LED Torch of 1 watt with microcontroller based circuit for attachment to Safety Helmet alongwith charger. LED life of more than 35000 hours, having Dual Beam spread with primary beam width of 40 degree & secondary beam width of 140 degree and Beam Lux at low/high power as 10000/20000 Lux at surface alongwith -		
202221	Built-in 4V/3000mAh Sealed Maintenance Free (SMF) Battery having back-up of 3-4 hours in full power mode and 5-6 hours in low power mode	Each	1840.00
202222	Built-in 3.7V/2000mAh Lithium Ion Battery having back-up of 6-8 hours in full power mode and 10-12 hours in low power mode	Each	2300.00
	Manufacture & supply of Measuring Tape Non-Metallic fibre glass type :		
202231	(a) 30 metre long	Each	327.75
202232	(b) 15 metre long	Each	207.00
202233	(c) 5 metre long	Each	120.75
202240	Manufacture & supply of A4 size paper for Xerox, Copier, Computer, Printer of 80 GSM thickness.	Ream	141.59
202250	Manufacture & supply of Gang Work-site Remote Control Hooter, as per RDSO Specification no. TM/SM/318, dated 21.05.2008	Each	62100.00
202260	Manufacture & supply of Mechanical Hooter Light Weight having range upto 500 metre	Each	30015.00
202270	Manufacture & supply of Walkie Talkie set as per RDSO approved specifications for 10 Km range	Set	16100.00
202280	Manufacture & supply of Battery for Walkie Talkie Set with 3 days back up	Each	1035.00
202290	Manufacture & supply of Battery Charger for Walkie Talkie Set	Each	230.00
202300	Manufacture & supply of Weedicide Chemical (Glyphosate), capable to kill entire weed in track	Litre	287.50
202310	Manufacture & supply of Dendrite (Synthetic Rubber Based) Adhesive	Litre	184.00
202320	Manufacture & supply of retro-reflective luminous sheets / tapes of approved quality of various colours on Engineering Indicator Boards etc. as per approved specifications and as directed by engineer in-charge	Sqm	1965.19
202330	Manufacture & supply of Engine Oil (Servo Premium CF4 15W40) or equivalent	Litre	103.50

Item No.	Description Of Item	Unit	Rate (Rs.)
202340	Manufacture & supply of Servo Grease MP of IOCL or MP Grease-2 of HPCL or MAK Grease MP-2 of BPCL	Kg	143.75
202350	Manufacture & supply of Hydraulic Oil (Servo System-68)	Litre	172.50
202360	Manufacture & supply of single liquid solution of Henkel or similar make Loctite Rail Safe in 250ml pack for tightening of all types of track nuts & bolts to prevent loosening during vibration having break loose torque of 400Nm to 540Nm, as per ISO 10123 norms with shear strength of liquid solution as 25 to 35 N/mm ² having viscosity 1500 to 3000 (Centipoise) & specific gravity as 1.1 ± 0.05	Each	3565.00
202370	Manufacture & supply of Poly Chloroprene rubber-based Solvent (toulene free, i.e. not harmful to human body) of Henkel or similar make Loctite Track Safe to prevent working out of rubber pads, having density 0.85±0.01 gm/cm ³ , viscosity of the solvent as 1500 to 1900 (centipoise) at 30 degree centigrade & shear strength of 8 to 12 Kg/Sq.Inch	Kg	2300.00
202380	Manufacture & supply of Red Banner Flag of size 2m x 1m, made of cotton cloth	Each	46.00
202390	Manufacture & supply of Hand Signal Flag (Red or Green) of approximate size 0.45m x 0.45m made of cotton cloth	Each	46.00
202400	Manufacture & supply of Heavy Duty AA Carbon-Zinc Battery of approx. 65mm long for Torch	Each	11.50
202410	Manufacture & supply of LED Torch of approx. 250mm long having Three Batteries of AA-Carbon-Zinc	Each	138.00
202420	Manufacture & supply of Whistle Thunder	Each	5.75

CHAPTER - 21 : Miscellaneous Items			
Item No.	Description of Item	Unit	Rate (Rs)
211010	Fixing MS Indicator Boards as per standard design including excavation, refilling, concreting in foundation and painting {Note : (1) Supply of steel for posts & boards shall be paid separately; (2) Excavation & concrete work will be paid separately} -		
211011	Boards with single post	Each	246.56
211012	Boards with two posts	Each	252.31
211020	Erection or removal of temporary Engineering Indicator Board or any other board at specified locations without causing infringement to track etc. complete and as directed		
211021	For erection	Each	189.81
211022	For removal	Each	155.71
211030	Dismantling Check Rail on curves on track of all rail sections, duly removing fish plates and bolts including removing chairs from sleepers, leading and stacking released materials away from track clear of infringements, complete and as directed	Metre	101.37
211040	Breaking Rails By Railway's Jimcrew :		
211041	Rail sections of 75R or below	Each	123.83
211042	Rail sections of 90R or above	Each	154.78
211050	Casting and positioning of pre-cast cement concrete Fouling Mark as per approved drawing at station yard, duly painting letters of Fouling Mark, complete and as directed	cum	4206.13
211060	Providing and erecting water proof Gypsy Tent of size 3m x 3m for a specific period of time and removal of the same after completion of work or as directed by Engineer in-charge	Per Day	630.20
211070	Provision of furniture temporarily for site work in good condition at different locations as per direction of Engineer In-charge, for a specific period of time & removing the same after completion of work		
211071	(a) Office Table of size 1.2m x 0.9m	Each Per Day	106.38
211072	(b) Office Chairs with cushioned seat, back and arms	Each Per Day	28.75
211073	Supply of Potable Drinking Water in 20 litres plastic container as per standard specifications (container shall be returned back after water consumption)	Each Container	69.00
211080	Plaining of Railway's Fish Plates of all rail sections for insulated joints by grinding / plaining / milling fishing plains of fish plate and enlarging bolt holes to 32mm dia.	Each	258.00
211090	Converting Railway's Fish plate into joggled fish plate for all rail sections as per standard drawing from Railway's fish plates including elongation of hole, bending, as required	Each	191.95
211100	Removing / Re-erecting existing Gradient Post / Kilometre Post, duly demolishing concrete foundation, fixing the post in cement concrete foundation as per drawing with 1:3:6 mix using 20mm hard aggregate, as directed (Cost of concrete work will be paid under relevant item seperately) -		
211101	(a) For Removing	Each	173.65
211102	(b) For Fixing / Re-erecting	Each	269.48

Item No.	Description of Item	Unit	Rate (Rs)
211110	Removal of night soil from track (ballast profile and cess) in yard line / block section by manual or mechanical means and dumping at indicated place outside the working area. This item can be operated at locations where trackmen are to be deputed for only track maintenance activities, as per satisfaction to the site engineer in-charge	Track Metre	15.57
211120	Breaking the damaged PSC sleepers including dragging, if required duly removing inserts and HTS wires safely and handing over to Railways at Stores or Depot of SSE/P.Way, including disposing the broken concrete pieces, as directed by Engineer in-charge	Each	202.76
211121	Deduction to Item no. 211120 for taking away HTS wire (Steel) of one PSC sleeper by contractor	Each	120.00
211130	Fixing vertically the unserviceable PSC sleepers at locations of tress-passing, railway boundary or to make temporary store by excavating trench, fixing PSC sleeper in trench and filling back open trench	Each	112.28
211140	Making Trolley Refuge of size 2.75m x 2.75m and placing released unserviceable PSC sleepers at all four sides of refuge (Earth-work to be paid separately)	Each	402.21
211150	Converting ordinary Broad Gauge ST Sleeper to Metre Gauge / Narrow Gauge ordinary ST Sleepers as per standard approved drawing by cutting, drilling, pressing to shape in hydraulic press & finishing {released cut pieces shall be deposited with Railway's Stores, as directed}	Each	166.41
211160	Converting ordinary Broad Gauge ST Turnout Sleeper to MG / NG Turnout ST sleeper as per standard approved drawing by cutting, pressing to shape in hydraulic press, drilling holes for loose jaws & rivets of slide chair, rivetting slide chair with converted sleeper & finishing {released cut pieces shall be deposited with Railway's Stores, as directed}	Each	649.03
211170	Supplying and fixing MS Sadle Plates for worn out seat of CST-9 sleepers 165mm x 150mm, pressed into channel shape suitably for fixing at rail seat in track -		
211171	(a) 3mm thick plate	Each	24.40
211172	(b) 4mm thick plate	Each	30.50
211180	Supplying and spraying in specified proportion Weedicide Chemical, capable to kill entire weed on track / cess / embankment with all labour, material, tools & plants etc. complete job in all respect. Scientific name of the chemical is Isopropylamine Salt of Glyphosate, in which active ingredient is Glyphosate (41%), colour is light amber to brownish, very low in toxicity and has favourable enviremental characteristics. It will be ensured that no weed growth occurs upto six months period, otherwise respraying shall be done by the contractor	Sq.metre	0.45

Item No.	Description of Item	Unit	Rate (Rs)
211190	Supplying & applying single liquid solution of Henkel or similar make Loctite Rail Safe in 250ml pack, having break loose torque of 400Nm to 540Nm, as per ISO:10123 norms with shear strength of liquid solutions as 25 to 35 N/mm ² , viscosity 1500 to 3000 (Centipoise) & specific gravity of 1.1 ± 0.05. for tightening of nuts & bolts at important locations, such as Bridges, SEJs, Turnouts, Fish Plates, Steel Channel Sleepers etc. Work includes opening of bolts, cleaning of bolts with suitable cleaner and tightening of bolts after applying Rail Safe, as directed by Engineer in-charge for -		
211191	(i) Bolts dia. 20mm to 25mm	Each	23.83
211192	(ii) Bolts dia. 26mm to 30mm	Each	27.51
211193	(iii) Bolts dia. 31mm to 40mm	Each	34.76
211200	Supplying & applying of Poly Chloroprene rubber-based Solvent (toulene free, i.e. not harmful to human body) of Henkel or similar make Loctite Track Safe to prevent working out of rubber pads, having density 0.85±0.01 gm/cm ³ , viscosity of solvent as 1500 to 1900 (centipoise) at 30 degree centigrade & shear strength 8 to 12 Kg/Sq.In. for bonding rubber pads / GR Sole Plates on PSC sleepers complete job, as directed by Engineer in-charge		
211201	(a) PSC Line sleepers	Each Rubber Pad	21.30
211202	(b) 1 in 8½ Turnout Set	Each Set	4604.60
211203	(c) 1 in 12 Turnout Set	Each Set	6844.80
211204	(d) 1 in 8½ Switch Assembly	Each Set	1151.53
211205	(e) 1 in 12 Switch Assembly	Each Set	1497.30
211206	(f) 1 in 8½ Crossing Assembly	Each Set	662.40
211207	(g) 1 in 12 Crossing Assembly	Each Set	959.87