



ಕರ್ನಾಟಕ ನಿರಾವರಿ ನಿಗಮ ನಿಯಮಿತ
(ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಉದ್ಯಮ)

KARNATAKA NIRAVARI NIGAM LIMITED

(A Karnataka Government Enterprise)

Office of the Executive Engineer, KNNL GRBCC Div No 3 Gokak. Dst : Belagavi, St : Karnataka
Fax & Phone No 08332-225213 email: knnlgrbccd3.gokak@gmail.com

No : KNNL/GRBCC D-3/PB/GB/Forest/2023-24/

1025

Dt: 7 SEP 2023

To,

The Deputy Conservator of Forests,
Ghataprabha Forest Division,
Karnataka Forest Department,
Gokak.

Sir,

Sub : Diversion of 575.0749 Ha of Forest land for the construction of dam across Markandeya River and ancillary infrastructure in forest lands of Gokak, Godachinamalki, Konnur and Mavanura villages in Gokak and Hukkeri Taluks, Belagavi District for storing 6 TMC of water under Ghatti-Basavanna Drinking Water Supply Project by KNNL, Govt of Karnataka (FP/KA/WATER/65437/2020)-reg.,

Ref: 1) EDS raised by Nodal officer, F(C)A, 1980 dated 23.08.2023.

With reference to above cited subject, the project cost for construction of retaining structure around the Nirvanappa Temple is worked out to Rs 17.50 Crores. Compliance to the observation here with uploaded in the PARIVESH Portal as 'Additional information' for your kind perusal and onward consideration of the proposal for issue of Stage-I Forest Clearance for the project.

Yours faithfully,

Executive Engineer,

KNNL, GRBCC Div No-3, Gokak.

Encl: 5 copies

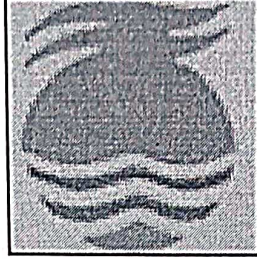
07/09

Corporate Identity Number (CIN)-U85110KA1998SGCO2450

Reg MD Office : 4th Floor, Coffee Board Building No.1 Dr.B.R.Ambedkar Veedhi, Bangalore-01
Ph: 080-22283074-78, Fax: 080-22366015 Web site: www.knnlindia.com

KARNATAKA NIRAVARI NIGAM LIMITED

(A Government of Karnataka Enterprise)




Name of work :- Construction of Approach Bridge and Circular Shaft for Nirvanappa Temple including approach road.

RS:- 17.50 Crores

**Executive Engineer
KNNL GRBC Division No. 3, Gokak**

**KARNATAKA NEERAVARI NIGAM LIMITED
GHATTI BASAVANNA DRINKING WATER PROJECT
GENERAL ABSTRACT**

No.	Particulars	Estimated Cost In Lakhs Rupees (As per CSR 2021-22)	Remarks
Part-A			
1	Construction of Approach Bridge and Circular Shaft for Nirvanappa Temple	1100.25	
	Total Part A	1100.25 Lakhs	
Part-B			
1	Approach Road	376.49	
	Total Part B	376.49 Lakhs	
	Total, (Part-A+Part-B)	1476.74 Lakhs	
	Add 18% GST	265.81 Lakhs	
	Grand Total	1742.55 Lakhs	
	Rounding Off	7.45 Lakhs	
	Grand Total	1750.00 Lakhs	
		17.50 Crores	
Rupees Seventeen Crores and Fifty Lakhs Only			


Assistant Executive Engineer,
KNNL, GRBCC Sub division No.5,
Gokak.


Executive Engineer,
KNNL, GRBCC Division No.3,
Gokak

KARNATAKA NEERAVARI NIGAM LIMITED
GHATTI BASAVANNA DRINKING WATER PROJECT

ABSTRACT ESTIMATE FOR APPROACH BRIDGE AND CIRCULAR SHAFT FOR NIRVANAPPA TEMPLE

No.	Item	Unit	Qty	Rate (Rs. Ps)	Amount (Rs.)
1	Cutting of Trees, excluding removal of stumps and roots of trees (Girth above 1800 mm) (SR Item No.2.1 (iv), (MORT&H Spec 201) page 7 of PWD (C&B), NH & PRED - Roads & Bridges Vol-3 for 2021-22)	each	100.00	2813.44	2,81,344/-
2	Removal of stumps and roots including backfilling with suitable material to required compaction (Girth above 1800 mm) (SR Item No.2.2 (iv), (MORT&H Spec 201) page 7 of PWD (C&B), NH & PRED - Roads & Bridges Vol-3 for 2021-22)	each	100.00	533.12	53,312/-
3	Clearing Grass and Removal of Rubbish & dumping to outside periphery by manual means. (SR Item No.2.3 (i), (MORT&H Spec 201) page 7 of PWD (C&B), NH & PRED - Roads & Bridges Vol-3 for 2021-22 Common SOR)	ha	2.00	31865.12	63,730/-
4	Preparing foundation bed for masonry or concrete by removing all loose material by wedging / chiselling and disposing off the same as directed and cleaning the surface with air and water jet including cost of all materials, machinery, labour etc., complete with all lead and all lifts. (SR Item No.2.2, Page 23 of WRD Specific items as part of Vol-IV of uniform Common SR 2021-22, Common SOR)	m ²	115.00	50.40	5,796/-

No.	Item	Unit	Qty	Rate (Rs. Ps)	Amount (Rs.)
5	<p>Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils Depth upto 3 m</p> <p>(SR Item No.1.14.1, page 8 of Common SR for Earthwork & Concrete Works Vol-1 for 2021-22_ Common SOR)</p> <p>0.00-3.00 m lift</p>	m ³	342.00	85.09	29,100/-
6	<p>Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work In ordinary/soft rock without blasting upto 1.5 m depth</p> <p>(SR Item No.1.15.1, page 8 of Common SR for Earthwork & Concrete Works Vol-1 for 2021-22_ Common SOR)</p> <p>0.00-1.50 m lift</p>	m ³	313.00	316.97	99,212/-

No.	Item	Unit	Qty	Rate (Rs. Ps)	Amount (Rs.)
7	Excavation for foundation in hard rock of all toughness including boulders above 0.6 m diameter (0.113 cum) for dam, spillway, intake structure, surface power house and other appurtenant structures by approved controlled blasting methods including control of vibration by use of delay detonators and control of fly rocks by muffling arrangements etc., and placing the excavated rock neatly in specified dump area as directed including cost of all materials, machinery, labour etc., complete with all lead and all lifts. (SR Item No 2.1, Page 23 of WRD Specific items as part of Vol-IV of uniform Common SR 2021-22_ Common SOR)	m ³	6085.00	785.97	47,82,627/-
8	Providing and laying in-situ vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down approved, clean, hard, graded aggregates for plain concrete works including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, providing mortar layer for lift joints, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with all lead and lifts. (SR Item No.2.14, Page 25 of WRD Specific items as part of Vol-IV of uniform Common SR 2021-22_ Common SOR)	m ³	18.00	6291.86	1,13,253/-

No.	Item	Unit	Qty	Rate (Rs. Ps)	Amount (Rs.)
9	<p>Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately)</p> <p>(SR Item No.2.4, page 17 of Common SR for Earthwork & Concrete Works Vol-1 for 2021-22_ Common SOR) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Upto 5 m (SR Item No.2.4.4, page 17 of Common SR for Earthwork & Concrete Works Vol-1 for 2021-22_ Common SOR)</p>	m ³			
	For (0.0 - 5.0 m)Lift		833.00	8233.35	68,58,381/-
	For (5.0- 10.0 m)Lift		409.00	8250.80	33,74,577/-
	For (10.0- 15.0 m)Lift		349.00	8268.26	28,85,623/-
	For (15.0- 20.0 m)Lift		318.00	8285.72	26,34,859/-
	For (20.0- 25.0 m)Lift		318.00	8303.17	26,40,408/-
	For (25.0- 30.0 m)Lift		318.00	8320.63	26,45,960/-
	For (30.0- 35.0 m)Lift		309.00	8320.63	25,71,075/-
	For (35.0- 40.0 m)Lift		133.00	8320.63	11,06,644/-

No.	Item	Unit	Qty	Rate (Rs. Ps)	Amount (Rs.)
10	<p>Providing and laying in position Reinforced cement concrete for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite / trap / basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately)</p> <p>M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates For 5-10m Lift</p> <p>(SR Item No.2.5.3, page 17 of Common SR for Earthwork & Concrete Works Vol-1 for 2021-22_ Common SOR)</p>		447.00	9180.78	41,03,810/-
11	<p>Providing, fabricating and placing in position steel reinforcement bars for RCC structures including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, lapping / welding joints wherever required, tying with 1.25 mm dia. soft annealed steel wire etc., complete with lead upto 1 km and all lifts.</p> <p>(SR Item No.2.10, Page 24 of WRD Specific items as part of Vol-IV of uniform Common SR 2021-22_ Common SOR)</p>	t	234.22	98139.40	2,29,86,210/-
12	<p>Providing and fixing 25 mm dia 2.75 m long ribbed steel anchor rods with one end split and driven firmly using steel wedge into 1.25 m deep 38 mm dia hole drilled in bed rock and other end provided with L-bend for embedding in concrete / masonry for spillway and appurtenatnt works including cost of all materials, machinery, labour, steel wedge, drilling and cleaning hole, filling hole with thick cement slurry, driving anchor rod etc., complete with all lead and all lifts.</p> <p>(SR Item No 2.9, Page 24 of WRD Specific items as part of Vol-IV of uniform Common SR 2021-22_ Common SOR)</p>	Each	219.00	1314.49	2,87,873/-

No.	Item	Unit	Qty	Rate (Rs. Ps)	Amount (Rs.)
13	Drilling 50 mm dia. holes vertical or inclined upto 10 degrees to vertical in rock / masonry / concrete by percussion drilling method using waggon drill or any other suitable equipment including cost of all materials, machinery, labour, redrilling through partially set grout wherever required etc., complete. (SR Item No.2.4.1, Page 23 of WRD, MI & KPCL Vol-4 for 2021-22_Common SOR)	Rm	240.00	352.80	84,672/-
14	Flushing grout holes of all sizes with water and air jets alternatively for an average period of 30 minutes and observing water intake after flushing including cost of all materials, machinery, labour etc.,complete. (For grout holes 3m c/c & 5 m depth from surface) (for consolidation grouting)	Rm	240.00	66.08	15,859/-
15	Consolidation grouting with neat cement grout mix of suitable consistency under specified grout pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete with all lead and (SR Item No.2.6.1, Page 24 of WRD, MI & KPCL Vol-4 for 2021-22_Common SOR)	t	5.00	14930.42	74,652/-
16	Providing, fitting and fixing mild steel railing complete as per drawing and Technical Specification (SR Item No 14.7, Page 103 of WRD Specific items as part of Vol-III of Roads and Bridges 2021-22_Common SOR)	m	166.00	4446.40	7,38,102/-
17	Back filling behind abutment, wing wall and return wall complete including compaction as per drawing and Technical Specification (SR Item No 13.5, Page 99 of Roads & Bridges Items as part of Vol-3 of SR 2021-22_Common SOR)	m³	1389.00	1057.28	14,68,562/-
18	Providing and laying Cement concrete wearing coat M-30 grade including reinforcement complete as per drawing and Technical Specifications. (Batching Plant) (SR Item No.14.3 (MoRT&H Spec 2702), Page 103 of PWD (C&B), NH & PRED - Roads & Bridges Vol-3 for 2021-22_Common SOR)	m³	34.00	15732.64	5,34,910/-

No.	Item	Unit	Qty	Rate (Rs. Ps)	Amount (Rs.)
19	<p>Providing and forming expansion joint for spillway bridge consisting of 75 x 75 x 6 mm angles 2 numbers provided with 250 mm long 12 mm dia. anchors fixed to both flanges at 150 mm c / c and 140 x 6 mm plate welded on top of one of the angle including cost of all materials, labour, machinery, providing and fixing 38 mm thick joint filler board matching the thickness of wearing coat, painting etc., complete with all lead all lifts.</p> <p>(SR Item No.2.20, Page 26 of WRD Specific items as part of Vol-IV of uniform Common SR 2021-22_ Common SOR)</p>	Rm	46.00	2792.16	1,28,439/-
20	<p>Design, fabrication, supply, erection and commissioning of structural steel hoist bridge consisting of columns, beams, bracings, stiffeners, ties, chequered plate covering, hand railing, ladder etc., with all other accessories for supporting rope drum hoist for operating barrage gates including cost of all materials, machinery, labour, cutting, aligning, anchoring, welding, finishing, cleaning, applying two coats of zinc chromate red oxide primer and three coats of approved synthetic enamel paint etc., complete as per specifications and approved drawings with all lead and all lifts including packing / forwarding charges for other materials.</p> <p>(SR Item No 6.21 Page 77 of WRD Specific items as part of Vol-IV of uniform Common SR 2021-22_ Common SOR)</p>	t	66.00	162867.24	1,07,49,238/-
21	<p>Providing Teak wood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, usage charges complete as per specifications.</p> <p>(SR Item No.12.10, Page 99 of PWD (C&B) - Buildings Vol-2 for 2021-22_ Common SOR)</p>	m ³	0.25	263926.88	65,982/-

No.	Item	Unit	Qty	Rate (Rs. Ps)	Amount (Rs.)
22	<p>Providing and fixing in position fully panelled Teak wood shutters for doors with stiles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and stiles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, usage charges complete as per specifications. (excluding cost of fixtures)</p> <p>(SR Item No.12.14, Page 100 of PWD (C&B) - Buildings Vol-2 for 2021-22_Common SOR)</p>	m ²	5.00	10454.08	52,270/-
23	<p>Providing and laying heavy duty cobble stones 60mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per m2 over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level , including cost of materials, labour and Usage charges of machinery complete as per specifications.</p> <p>(SR Item No.9.31, Page 64 of PWD (C&B) - Buildings Vol-2 for 2021-22_Common SOR)</p>	m ²	929.00	1282.40	11,91,350/-
24	<p>Providing, supplying to work site, Submersible Pump Set of 150mm dia suitable for bore well and confirming to IS 8034-2000; 3Phase, SS Bowl & Impeller with Low volt Motor as per specifications, as per necessary ammendments and instructions of engineer incharge of work. For 5 HP</p> <p>(SR Item No.13.1 (SOR CODE P130A), Page 159 of BWSSB, KUWSDB & RWS Vol-5 for 2021-22_Common SOR)</p>	each	1.00	30098.88	30,099/-


No.	Item	Unit	Qty	Rate (Rs. Ps)	Amount (Rs.)
25	4mm thk Blue Polycarbonate Roofing Sheet Market rate		4028.00	3388.89	1,36,50,449/-
26	4 numbers of Toilet blocks	m ²	54.20	2000.00	1,08,399/-
27	Provision for Water supply & Pumping (8% of Toilet cost)	LS			8,672/-
28	Drinking water	LS			10,00,000/-
29	Sitting Benches (Market rate)	Each	20.00	5000.00	1,00,000/-
30	Provision for Lift GBD Lift quoted in 2020 & quoted rate for 76m ht = Rs. 3050847.46 50% quoted rate is considered for Nirvanappa temple for 35m ht shaft = 50% of Rs.3050847.46 = Rs.1525423.73 30% increased for 3 years = 30% of Rs. 1525423.73 = Rs.457627.119 Total Rate Considered for lift = 1525423.73 + 457627.119 = Rs. 1983050.849 Say Rs. 20,00,000				20,00,000/-
31	Brass Kalasa Lump sum Cost	LS			5,00,000/-
32	Provision for Electrification	LS			10,00,000
33	Provision for Beautification	LS			2,00,00,000/-
Total					11,00,25,450/-
Rupees Eleven Crore Twenty Five Thousand Four Hundred Forty Nine And Paise Fifty Nine Only					

Assistant Executive Engineer,
KNNL, GRBCC Sub division No.5,
Gokak.

Executive Engineer,
KNNL, GRBCC Division No.3,
Gokak

KARNATAKA NEERAVARI NIGAM LIMITED
GHATTI BASAVANNA DRINKING WATER PROJECT
ABSTRACT OF COST ESTIMATES OF APPROACH ROAD

No	Descriptions	Estimated Amount, Rs.
	ROAD	
1	SITE CLEARANCE	5,05,251/-
2	EARTHWORKS	37,34,247/-
3	SUB-BASES AND BASE WORKS	1,44,07,476/-
4	BITUMINOUS PAVEMENT WORKS	1,07,92,688/-
5	DRAIN WORKS	82,09,013/-
	Sub Total for Civil Construction Cost (A)	3,76,48,675/-


Assistant Executive Engineer,
KNNL, GRBCC Sub division No.5,
Gokak.


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KNNL, GRBCC Division No.3,
Gokak

KARNATAKA NEERAVARI NIGAM LIMITED
GHATTI BASAVANNA DRINKING WATER PROJECT
ABSTRACT COST ESTIMATE OF APPROACH ROAD

No.	Description	Quantity	Units	Rate (Rs.)	Amount (Rs.)
1	SITE CLEARANCE				
1.01	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. (iii) By Mechanical Means using Motor Grader A. In area of light jungle (As per item 2.6 (iii) A of PWD SoR for Roads and Bridges Volume 3, page 07) SoR Corrigendum Dated 21-04-2022 (Vol 1-2-3) Updated				
	Sub Total	34,375.00	Sqm	14.70	5,05,251/-
	Sub Total for Bill-1				5,05,251/-
2	EARTHWORKS				
2.01	Compacting Original Ground Compacting original ground supporting embankment Loosening, leveling and Compacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Table 300-2 for embankment construction. MORTH Specification No. 305.34 (As per item 3.7 of PWD SoR for Roads and Bridges Volume 3, page 15)				
	Sub Total	3,437.50	m³	91.35	3,14,016/-
2.02	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils upto 300 mm depth (As per item 1.12 of PWD SoR for Roads and Bridges Volume 1, page 8)				
	Sub Total	4,125.00	m³	68.25	2,81,531/-

No.	Description	Quantity	Units	Rate (Rs.)	Amount (Rs.)
2.03	Earth work in surface excavation by mechanical means for lowering & leveling the ground without blasting for all works other than foundation in Ordinary/Soft rock & depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work In Ordinary/Soft rock upto 300 mm depth (As per item 1.13 of PWD SoR for Roads and Bridges Volume 1, page 8) SoR Corrigendum Dated 06-07-2022 (Vol 1-2-3)-Updated				
	Sub Total	1,031.25	m³	284.55	2,93,442/-
2.04	Construction of Embankment by excavating the available approved Gravel/Murum deposited at a place or borrow pits during or prior excavation with all lifts and lead, transportation to site, spreading, grading to required slope and compacting to meet the requirement complete as per specifications, including cost of labour, rolling, water, all materials, usage & all other appurtenances required to complete the work. (As per item 1.8 of PWD Common SoR Volume 1, page 07)				
	Sub Total	2,534.40	m³	422.10	10,69,770/-
2.05	Construction of Embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded with desired compaction. (As per item 1.7 of PWD Common SoR Volume 1, page 07)				
	Sub Total	1,689.60	m³	118.65	2,00,471/-
2.06	Construction of Subgrade and Earthen Shoulders Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2 MORTH Specification No. 305 (As per item 3.6 of PWD SoR for Roads and Bridges Volume 3, page 15)				
	Sub Total	3,632.00	m³	433.65	15,75,017/-
	Sub Total for Bill-2				37,34,247/-
3	SUB-BASES AND BASE WORKS				
3.01	Granular Sub base A. Plant Mix Method Construction of Granular Sub-Base of required grading as per design mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401 (v) For Grading -V Material MORTH Specification No. 401 (As per item 4.1 A (V) of PWD SoR for Roads and Bridges Volume 3, page 19)				
	Sub Total	4,071.00	m³	2,464.35	1,00,32,369/-

No.	Description	Quantity	Units	Rate (Rs.)	Amount (Rs.)
3.02	Water Bound Macadam Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with 3 wheeled steel/ vibratory roller in stages to proper grade and camber, applying and brooming requisite type of screening/ binding materials to fill up the interstices of coarse aggregate, watering and compacting to the required density. B.Mechanical means (ii)Grading-II (53 mm to 22.4 mm) (b)Using Screening Type B (11.2mm agg) (As per item 4.24 (B)(ii)(b) of PWD SoR for Roads and Bridges Volume 3, page 24)				
	Sub Total	1,827.53	m³	2,394.00	43,75,107/-
	Sub Total for Bill-3				1,44,07,476/-
4	BITUMINOUS PAVEMENT WORKS				
4.01	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70 kg per m2 using mechanical means. MORTH Specification No. 502 (As per item 5.1 of PWD SoR for Roads and Bridges Volume 3, page 29) SoR Corrigendum Dated 21-04-2022 (Vol 1-2-3) Updated As per Issue Rate dated 09/11/2022				
	Sub Total	18,750.00	Sqm	44.10	8,26,875/-
4.02	Tack coat on Granular surface treated with primer Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on Granular Surface (As per item 5.4 of PWD SoR for Roads and Bridges Volume 3, page 29) SoR Corrigendum Dated 21-04-2022 (Vol 1-2-3) Updated As per Issue Rate dated 09/11/2022				
	Sub Total	18,750.00	Sqm	14.70	2,75,625/-
4.03	Providing and laying Bituminous Macadam with 40/60 tph capacity hot mix plant using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 3.3% by weight of mix, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction MORTH Specification No. 504 (As per item 5.6 of PWD SoR for Roads and Bridges Volume 3, page 30) As per Issue Rate dated 09/11/2022				
	Sub Total	937.50	m³	7,333.20	68,74,875/-

No.	Description	Quantity	Units	Rate (Rs.)	Amount (Rs.)
4.04	Providing, laying and rolling of open - graded premix surfacing of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using viscosity grade bitumen VG-30 to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable Hot mix plant of capacity not less than 40/60 TPH laying and rolling with a smooth wheeled roller, finished to required level and grades. MORTH Specification No. 510 (As per item 5.19 of PWD SoR for Roads and Bridges Volume 3, page 37) As per Issue Rate dated 09/11/2022				
	Sub Total	18,750.00	Sqm	150.15	28,15,313/-
	Sub Total for Bill-4				1,07,92,688/-
5	DRAIN WORKS				
5.01	Earth work excavation by manual means for drains, canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such similar works in all kinds of soils, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenances required to complete the work. In all kinds of soils Depth upto 1.5 m				
	Sub Total	9,644.25	m³	195.30	18,83,522/-
5.02	Providing and laying of Filter media with granular materials/ stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical Specification.				
	Sub Total	1,997.25	m³	1,160.25	23,17,309/-
5.03	Providing and laying Pitching 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 Stone / Boulder				
	Sub Total	2,334.75	m³	1,716.75	40,08,182/-
	Sub Total for Bill-5				82,09,013/-
	Total Cost				3,76,48,675/-

Assistant Executive Engineer,
KNNL, GRBCC Sub division No.5,
Gokak.

Executive Engineer,
KNNL, GRBCC Division No.3,
Gokak

