

**BIHAR STATE HIGHWAYS PROJECT
BID DOCUMENT
FOR
CIVIL WORKS**

**Improvement/Upgradation, Widening and Strengthening of
Bettiah -Narkatiyaganj Road (SH-105) under Civil work
Contract Package No. BSHP-III(Phase-2)/Pkg-5/SH-105**

**Invitation No. – BSHP-III(Phase-2)/ Pkg-5/SH-105/ 2021-22,
Patna, Dated 17.02.2022**



BIHAR STATE ROAD DEVELOPMENT CORPORATION LTD.

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ASIAN DEVELOPMENT BANK

SUMMARY SHEET

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiya ganj Road (SH-105) under BSHP-III
(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

Sl. No.	BILL No.	DESCRIPTION	AMOUNT (INR)	
			IN FIGURE	IN WORDS
1	Bill No. 01	Site Clearance and Dismantling		
2	Bill No. 02	Earthwork		
3	Bill No. 03	Granular Sub - Base and Base Course		
4	Bill No. 04	Bituminous Course		
5	Bill No. 05	Culverts		
6	Bill No. 06	Bridges		
7	Bill No. 07	Drainage and Protection works		
8	Bill No. 08	Traffic Signs, Markings and other Appurtenances		
9	Bill No. 09	Miscellaneous		
10	Bill No. 10	Daywork		
Total Amount of Bill No.-01 to Bill No. -10 (A)				
Provisional sum @ 13% on "A"				
Total Amount of Bill No.-01 including Provisional Sum				

BILL OF QUANTITIES

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiya Road (SH-105) under BSHP-III
(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Fig.	In Words	In Fig.	In Words
BILL NO. 1 SITE CLEARANCE AND DISMANTLING								
1.01	201	Cleaning and Grubbing Road Land Cleaning & grubbing road land including uprooting trunk, vegetation, grass, bushes, shrubs, sapling and trees having girth upto 300mm, including excavation & backfilling to the required density, removal of left over stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned with all leads and lifts including removal and disposal of top organic soil not exceeding 150 mm in thickness.	ha.	63				
1.02	201	Cutting of trees, making into logs, including removal of stumps and roots, backfilling with suitable material to required compaction, cutting of trunks, branches and handling, stacking and disposal of cleared material along with carriage of wooden logs to forest stock yard / depot with all lifts & leads.						
		(a) Above 300mm up to 600mm	No.	6773				
		(b) Above 600mm up to 900mm	No.	2822				
		(c) Above 900mm up to 1800mm	No.	1129				
		(d) Above 1800mm	No.	564				

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiyagan Road (SH-105) under BSHP-III
(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Fig.	In Words	In Fig.	In Words
BILL NO. 1 SITE CLEARANCE AND DISMANTLING								
1.03		Translocation of Trees of different girths including minimum pruning of the branches, uprooting of trees, transportation, applying required hormone/chemicals on roots, plantation and taking care of trees minimum upto one year, removal of serviceable branches stumps, carriage of serviceable materials and unserviceable materials to forest stock yard / depot with all leads and lift and backfilling with suitable material to required compaction in the depression/ pit including cost of all types of machinaries and labour all complete job as per direction of Engineer In- Charge. (Translocation of trees as per guide line of forest Department/ MOEF specification)						
		(a) Above 300 mm upto 600 mm.	No.	1355				
		(b) Above 600 mm upto 900 mm.	No.	565				
		(c) Above 900 mm upto 1800 mm.	No.	226				
		(d) Above 1800 mm	No.	113				

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiyagan Road (SH-105) under BSHP-III
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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Fig.	In Words	In Fig.	In Words
BILL NO. 1 SITE CLEARANCE AND DISMANTLING								
1.04	202	Dismantling of Structures Dismantling of existing structure like Culverts, Bridges, Retaining walls and other structures comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, including backfilling of holes & depressions caused by dismantling operations with approved material and compacted to required density as directed by Engineer, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead complete.						
		(i) Brick/Stone Masonary Work in cement mortar	cu.m	2497				
		(ii) Plain Concrete/ Reinforced Cement Concrete structures including clearing, straightening & cutting of bars and separating them out from RCC/PSC.						
		(a) Cement concrete/PCC	cu.m	1154				
		(b) Reinforced Cement Concrete	cu.m	295				
		(iii) Ordinary Kilometer Stone	No.	34				

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiyagan Road (SH-105) under BSHP-III
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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Fig.	In Words	In Fig.	In Words
BILL NO. 1 SITE CLEARANCE AND DISMANTLING								
		(iv) Guard Rails	m	13				
1.05	202	Dismantling of flexible pavements and disposal of dismantled materials with all leads and lifts, stacking serviceable and unserviceable materials separately by Mechanical means.						
		Bituminous courses	cu.m	7676				
1.06	202	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials with all lifts & leads, stacking serviceable and unserviceable materials separately	cu.m	160				
1.07	202	Credit towards salvage value of dismantling of Flexible pavements per Technical Specification Clause 202.						
		Bituminous courses	cu.m	3848				
		Credit towards salvage value of dismantled materials from rigid pavements and structures as per Technical Specification Clause 202.						

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Fig.	In Words	In Fig.	In Words
BILL NO. 1 SITE CLEARANCE AND DISMANTLING								
1.08	202	(i) Brick/Stone Masonary Work in cement mortar	cu.m	2497				
		(ii) Plain Concrete/ Reinforced Cement Concrete structures including clearing, straightening & cutting of bars and separating them out from RCC/PSC.						
		(a) Cement concrete/PCC	cu.m	114				
		(b) Reinforced Cement Concrete	cu.m	295				
		(iii) Ordinary Kilometer Stone	No.	34				
		(iv) Guard Rails	m	13				
		Total of Bill No. 1						

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
Bill No. 2 EARTH WORK								
2.01	301	Excavation in Soil using Hydraulic Excavator and Tippers with Disposal. Excavation for roadwork in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes in accordance with requirements of lines, grades and cross sections and transporting suitable cut materials to the embankment location and disposing off unsuitable cut material with all lifts and leads complete as per Technical Specification Clause 301.						
		All types of soil.	cu.m	1,27,786				
2.02	305	Construction of Embankment with Material obtained from Borrow pits Construction of embankment with approved material obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2 of MoRTH specification complete as per drawings and Technical Specification Clause 305.	cu.m	98,595				
2.03	305	Construction of Embankment with Material Deposited from Roadway Cutting. Construction of embankment with approved material with all lifts and leads, deposited at site from Roadway cutting and excavation from drain and foundation of the structures, graded and compacted to meet requirement of table 300-2, complete as per Technical Specifications Clause 305	cu.m	92,171				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
2.04	305 & 408	Construction of Subgrade and Earthen Shoulders Construction of Subgrade and Shoulder with approved material obtained from borrow area with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2 of MoRTH specification complete as per drawings and Technical Specification Clause 305 and 408.	cu.m	2,25,749				
		Total of Bill No. 2						

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 3 GRANULAR SUB-BASE AND BASE COURSES.								
3.01	401	Granular Sub-Base with Graded Material (Table:- 400-1) By Plant Mix Method (Grade V) Construction of granular sub-base by providing close graded material, mixing in a mechanical mix plant at OMC, carriage of the mix 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	cu.m	1,32,262				
3.02	406	Wet Mix Macadam (Plant Mix Method) Providing laying spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by pipe to site, laying in uniform layers with roller in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Technical Specifications Clause 406 and Table 400-13	cu.m	99,072				
		Total of Bill no. 3						

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 4 BITUMINOUS COURSES								
4.01	502	Providing and applying bituminous prime coat (cationic Bitumen Emulsion SS1 Grade conforming to IS: 8887) on prepared surface of granular base including clearing of road surface and spraying primer at the rate of mentioned in Table 500-3 of Technical Specification using mechanical means.	sq.m	3,77,071				
4.02	503	Providing tack coat (cationic Bitumen Emulsion RS1 Grade conforming to IS: 8887) using emulsion pressure distributor at the rate mentioned in Table 500-5 of Technical Specification on the prepared bituminous/granular surface cleaned with mechanical broom..						
		(i) Granular surface treated with primer	sq.m	377071				
		(ii) Bituminous surface	sq.m	3,52,763				
4.03	505	Dense Graded Bituminous Macadam Providing and laying Dense Graded Bituminous Macadam (With Bitumen VG-30 Grade) with higher capacity batch type HMP using crushed aggregates of specified grading, premixed with bituminous binder at the rate mentioned in supplementary Technical specification, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 and Table 500-10 complete in all respects.						

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
		Grading 1	cu.m	35,276				
4.04	507	Providing and laying bituminous concrete with higher capacity batch type hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder at the rate mentioned in supplementary Technical specification, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 and Table No- 500-17 complete in all respects						
		Grading 1	cu.m	17,636				
		Total of item no. 4						

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	Words	In Figure	In Words
BILL NO. 5 CULVERT								
5.01	304	Earthwork in excavation of foundation for structures complete including setting out construction of shoring & bracing, removal of stumps & other deleterious matter, dressing of sides & bottom and backfilling with approved material including compaction by mechanical means with all leads & lifts complete as per drawing and technical specification Clause 304 & 2903.	cu.m	3,294				
5.02	305, IRC 78 & 2200	Providing and laying Back filling behind abutments, wing walls and return walls or any other area with selected granular material of approved quality including all material, labour, equipment carriage etc. all complete as per drawing and Technical Specification Clause 305, IRC 78 & 2200.						
		Granular material	cu.m	9,119				
5.03	300, 2504 & IRC 78.	Providing and laying of filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of Technical 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 including all material, labour, equipment carriage etc. as per drawing and Technical Specification Clauses 300, 2504 & IRC 78.	cu.m	2,230				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 5 CULVERT								
5.04	1500,1700 & 2100	Providing and laying Plain/Reinforced Cement Concrete in Open Foundation including centering & shuttering but excluding Reinforcement complete as per Drawing and Technical Specifications Clauses 1500, 1700 & 2100. Using Batching plant and concrete pump						
		(I) PCC Grade M15	cu.m	927				
5.05	1500, 1600, 1700 & 2200	Providing & laying Reinforced cement concrete in Foundation/Sub-structure/ Superstructure complete including centering and shuttering but excluding reinforcement as per drawing and Technical Specifications, 1500,1600, 1700 & 2200. Using batching plant transit mixer & Concrete pump						
		RCC Grade M25	cu.m	4,301				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 5 CULVERT								
5.06	1500, 1700, 2100, 2700	Reinforced cement concrete (M30 grade) approach slab including reinforcement and formwork complete as per drawing and Technical specification	cu.m	1,103				
5.07	1600	Providing & fixing in position thermomechanically treated (TMT) Fe 500 grade HYSD reinforcement bars in foundations, substructures, superstructure etc. complete as per drawings and Technical Specifications Section 1600.	MT	300				
5.08	2706 & 2200	Providing weep holes in Brick masonry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 100 mm dia AC/PVC-U (IS:13952, Type B), AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing force, Complete as per drawing and Technical Specifications	No.	2,476				
5.09	2503	Providing and laying boulder apron on river bed for protection against scour with stone boulders weighing not less than 40 kg each complete as per drawing and Technical specification Boulder laid dry without wire crates.	cu.m	1,778				
5.10	2500	Providing and laying Flooring complete as per drawing and Technical specifications laid over cement concrete bedding A.Rubble stone laid in cement concrete mortar 1:3	cu.m	2,472				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 5 CULVERT								
5.11	IRC 7	Painting two coats after filling the surface with synthetic enamel paint culvert No. and span arrangements as per as directed by Engineer	No.	90				
5.12	2705	Providing and fixing drainage spouts as per drawings and Technical Specifications Clause 2705.	No.	120				
5.13	2600	Providing and fixing 20mm thick compressible fibre board in expansion joint complete as per drawing and Technical Specification.	m ²	1,210				
5.14	803	Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces	sq.m	369				
5.15	1500, 1700, 2100, 2700	PCC M15 Grade levelling course below approach slab complete as per drawing and Technical specification	cu.m	538				
5.16	1500,1700,2100,2200 &2507	Curtain wall complete as per drawing and Technical Specification.						
		M-15 Grade	cu.m	2,328				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	Words	In Figure	In Words
BILL NO. 5 CULVERT								
5.17	2900	Providing, Laying and Jointing Reinforced Cement Concrete Pipe NP4/ prestressed concrete pipe for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 and including excavation, protection works, backfilling, concrete and masonry works in head walls and parapets and as per drawing and Technical Specification.						
		1200 mm Dia	m	65				
		Total of Bill no. 5						

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 6 BRIDGES								
6.01	304	Earthwork in excavation of foundation for structures complete including setting out construction of shoring & bracing, removal of stumps & other deleterious matter, dressing of sides & bottom and backfilling with approved material including compaction by mechanical means with all leads & lifts complete as per drawing and technical specification Clause 304						
		In All type of Soil.	cu.m	2,801				
6.02	305, IRC 78	Providing and Laying Back filling behind abutments, wing walls and return walls or any other area with selected granular material of approved quality including all material, labour, equipment carriage etc. all complete as per Drawing and Technical Specifications clause 305, I.C. 78.						
		Granular material	cu.m	2,517				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 6 BRIDGES								
6.04	305 & 2500 IRC 78	Providing and laying of filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of Technical 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 including all material, labour, equipment carriage etc. as per drawing and Technical Specification. Clauses 300, 2504 & IRC 78.	cu.m	1,372				
6.05	1500, 1700 & 2100	Providing and laying Plain/Reinforced Cement Concrete in Open Foundation including centering & shuttering but excluding Reinforcement complete as per Drawing and Technical Specifications. Using Batching plant, Transit Mixture and concrete pump						
		(i) PCC M-15 Grade	cu.m	162				
		(ii) PCC M-20 Grade	cu.m	32				
		(iii) RCC M- 35 Grade	cu.m	469				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 6 BRIDGES								
6.07	1100&1700	Providing Bored Cast-in-situ vertical piles including initial and routine tests complete excluding steel reinforcement as per drawings and technical specifications sections 1100 and 1700						
		(M-35 Grade) Pile diameter -1200mm	m	900				
6.08	1100, 1500, 1700 & 2100	Providing and laying Reinforced Cement Concrete in Pile caps including cantering and shuttering but excluding steel Reinforcement complete as per Drawings and Technical Specifications Section 1100,1500, 1700 and 2100. (Using batching plant, Transit Mixture and concrete pump)						
		Grade M-35	cu.m	794				
6.09	1500, 1700 & 2200	Plain Cement Concrete/ Reinforced Cement Concrete for substructure complete including cantering and shuttering but excluding steel reinforcement as per drawings and Technical Specifications Sections 1500, 1700 and 2200.(Using batching plant, Transit Mixture and concrete pump)						
		RCC Grade M-30	cu.m	465				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 6 BRIDGES								
		RCC Grade M-35	cu.m	856				
		RCC Grade M-40	cu.m	1027				
6.10	1500, 1700, 1800 & 2300	Reinforced/Prestressed Cement Concrete Superstructure complete including centering and shuttering but excluding steel reinforcement as per drawing and technical specifications 1500, 1700, 1800 and 2300.(Using batching plant, Transit Mixture and concrete pump)						
		RCC Grade M-35 Solid slab	cu.m	976				
6.11	1600	Providing & fixing in position thermomechanically treated (TMC) Fe 500 grade HYSD reinforcement bars in foundations, substructures, superstructure etc. complete as per drawings and Technical Specifications Section 1600.						
		Foundations	MT	227				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 6 BRIDGES								
		(ii) Substructure	MT	169				
		(iii) Superstructure	MT	134				
6.12	500 & 2700	Providing and laying 25mm thick mastic asphalt wearing course on top of deck slab excluding prime coat with paving grade bitumen meeting the requirements given in MORTH Specification Table 500-39, Table 500-40, Table 500-41, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen pre-coated fine grained hard stone chipping of 9.5 mm nominal size at the rate of 0.005cum per 10 sq.m and at an approximate spacing of 10 cm centre to center in both directions, pressed into surface when the temperature of surfaces not less than 100 deg. C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 516 of Technical Specification.) in deck slab after applying prime coat complete as per drawings and technical specifications section 500 and 2700 or as directed by Engineer.	sq.m	1,492				
6.13	2705	Drainage Spouts complete as per drawing & Technical Specifications .	No.	42				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 6 BRIDGES								
6.14	2000	Providing and Laying Tar paper bearing on abutments/ piers as bearing for receiving RCC work in superstructure as per drawing and Technical Specifications						
		Tar paper bearing	sq.m	15				
6.15	2000	Providing and fixing in position true to line and level POT cum PTFE bearings of capacity as including cost of all materials, fixtures, preparing surface for receiving bearing grouting of sleeves with non stream high strength grout, load testing of bearing, transporting and fixing in position including all leads and lifts etc. complete as per approved design and drawing and Technical Specification, Section 2000. The rate is for finished item complete and paid only after fixing it below the girder. The bearing shall be procured from the MoRTH approved manufacturer only.						
		a) Free bearing						
		Capacity 2300 KN	No.	33				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 6 BRIDGES								
		b) Fixed bearing						
		Capacity 2300 KN	No.	2				
6.16	2606	Providing and fixing 20mm thick compressible fibre board in expansion joint complete as per drawing and Technical Specification.	m	96				
6.17	2607	Providing and laying of strip seal expansion joint catering to a maximum horizontal movement upto 70mm , complete as per approved drawings and standard specifications to be installed by the manufacturer/supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation	m	96				

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiyaganj Road (SH-105) under BSHP-III
(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 6 BRIDGES								
6.18	811	Reinforced Cement Concrete Crash Barrier (Provision of an Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with Reinforced Cement Concrete with HYSD reinforcement conforming to MORTH specification & as per details given in IRC 5 including dowel bars 25 mm dia, 450 mm long at expansion joints filled with pre-moulded asphalt filler board etc as per approved drawing and at locations directed by the Engineer, all as specified (Area = 0.243 sqm/ Single face)						
		M-40 Grade	m	235				
6.19	1500, 1600, 1700 & 2704	Reinforced cement concrete approach slab including reinforcement and formwork complete as per drawing and technical specification.						
		M-30 grade	cu.m	197				
6.20	1500, 1700,	PCC M15 grade levelling course below approach slab complete as per drawing and Technical specification						

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiyaganj Road (SH-105) under BSHP-III
(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 6 BRIDGES								
	1600, 2704	a) M-15 grade	cu.m	89				
6.21	2706 & 2200	Providing weep holes in brick masonry / plain / reinforced concrete abutments, wing walls / return walls etc. with 100mm dia A.C. /PVC pipe, extending through the full width of structure with slope of IV:20H towards draining face complete as per drawing, and Technical specifications .	No.	1,647				
6.22	IRC-7	Providing and painting with Synthetic enamel paint of approved quality on bridges with bridge no. and span arrangements complete as per IRC - 7, 1971.	No.	24				
6.23	800	Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces	sq.m	432				
6.24	1500,1600,1700,2200 & 2703	Construction of precast RCC railing of M30 grade aggregate size not exceeding 12mm, true to line and grade tolerance of vertical RCC post not to exceed 1 in 100, centre to centre spacing between vertical post not to exceed 2000mm, leaving adequate space between vertical post for expansion , complete as per approved drawings and technical specifications.	m	271				

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiyaganj Road (SH-105) under BSHP-III
(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specifi- cation	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 6 BRIDGES								
6.25	2500	Providing & laying filter material underneath pitching in slopes complete as per drawing and Technical specifications	cu.m	195				
6.26	2500	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	cu.m	332				
		Total of Bill no. 6						

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiyaganj Road (SH-105) under BSHP-III
(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 7 DRAINAGE AND PROTECTION WORKS								
7.01	304	Earthwork in excavation of foundation for structures as per drawing and technical specification, including setting out construction of shoring & bracing, removal of stumps & other deleterious matter, dressing of sides & bottom and backfilling with approved material For Drain & Retaining wall .	cu.m	29049				
7.02	1500, 1700 & 2500	Providing & Laying Plain cement concrete M-15 grade below drain/ Retaining Wall as per drawing and Technical Specifications sections 1500, 1700 and 2500	cu.m	830				
7.03	1500, 1700 & 2100	Providing & Laying RCC M -25 using batching plant transit mixer and concrete pump for wall & slab etc. as per drawing excluding reinforcement Technical Specification section 1500, 1700 & 2100	cu.m	5463				
7.04	1600	Supplying, fitting and placing TMT (Fe-500) grade HYSD bar reinforcement in foundation sub-structure/Drain complete as per drawing and technical specifications	tonne	300				

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(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 7 DRAINAGE AND PROTECTION WORKS								
7.05	2500	Providing and laying pitching on slopes laid over prepared filter media including boulder apron (not less than 40 kg) laid dry in front of toe of embankment complete as per drawing and Technical specifications.	cu.m	19786				
7.06	1500, 1700 & 2500 and IRC:SP-42	Providing and laying Chute Drain as per approved drawing and IRC:SP-42 and Technical Specifications section 1500, 1700 and 2500 and as directed by Engineer	m	3297				
7.07	1500, 1700 & 2500 and IRC:SP-42	Providing and laying Energy Dissipation chamber as per approved drawing and IRC:SP-42 and Technical Specifications section 1500, 1700 and 2500 and as directed by Engineer	No.	470				
7.08	300 & 2504 IRC 78	Providing and laying of filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 25.14.2. of MoRT&H specifications, 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 including all material, labour, equipment carriage etc. as per drawing and Technical Specification	cu.m	9893				

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(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 7 DRAINAGE AND PROTECTION WORKS								
7.09	2706	Providing weep holes in Brick masonry/ Plain/ Reinforced concrete abutment, wing wall/return wall with 100 mm dia AC/PVC pipe, extending through the full width of the structure with slope of 1V:20H towards drawing face. Complete as per drawing and Technical Specifications	No.	9220				
7.10	811	Providing and erecting a "W" metal beam crash barrier comprising of 3mm thick corrugated sheet metal beam rail, 70cm above road/ground level, fixed on ISMC series channel vertical post, 150x75x5 mm spaced 2m centre to centre, 1.8m high, 1.1m below ground/road level, all steel parts and fittings to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150x75x5mm, 330mm long complete as per clause 811	m	9410				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 7 DRAINAGE AND PROTECTION WORKS								
7.11	409	Construction of cement concrete kerb with channel with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M15 grade foundation 150 mm thick, kerb channel 300 mm wide, 50 mm thick in PCCM20 grade, sloped towards the kerb, kerb stone with channel laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 409	m	9410				
		Total of Bill no. 7						

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(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 8 TRAFFIC SIGNS MARKING AND OTHER APPURTENANCES								
8.01	800, IRC:35	Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads @250gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level, uniform and free from streaks and holes						
		(a) Lane/ Centre line/edge line/transverse marking/ Zebra Crossings/ Arrows etc.	sq.m	4,877				
8.02	801	Direction and Place Identification Sign upto 0.9 sqm Size Board. Providing and fixing of retro-reflectorisred cautionary, mandatory and informatory signs as per IRC 67 made of Class-C Type XI retro reflective sheeting fixed over 2mm thick aluminium sheeting vide clause 801.3, 3mm/4mm thick Aluminium composite material sheet depending on the size of the sign fixed over back support frame of min 25x25x3mm angle mounted on a mild steel circular pipe 65 NB , 3.2mm thickness firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45cmx45cmx60cm, 60cm below ground level as per approved drawing.The sign shall be maintained as per section 12 of IRC 67.	sq.m	32				

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(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 8 TRAFFIC SIGNS MARKING AND OTHER APPURTENANCES								
8.03	801	<p>Retro- Reflectorised Traffic Signs Providing and fixing of retro-reflectorised cautionary, mandatory, and informatory signs as per IRC:67 made of Class-C Type XI retro reflective sheeting fixed over 2mm thick aluminium sheeting vide clause 801.3, 3mm/4mm thick Aluminium composite material sheet depending on the size of the sign fixed over back support frame of min 25x25x3mm angle mounted on a mild steel circular pipe 65 NB , 3.2mm thickness firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45cmx45cmx60cm, 60cm below ground level as per approved drawing.The sign shall be maintained as per section 12 of IRC 67.</p>						
		(i) 80 cm X 60 cm rectangular	No.	22				
		(i) Single Chevron (500 x 600)	No.	88				
		(ii) 90 cm circular	No.	104				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 8 TRAFFIC SIGNS MARKING AND OTHER APPURTENANCES								
		(iii) 90 cm high octagon	No.	26				
		(iv) Object Hazard Marker (300 x 900)	No.	288				
		(v) 90 cm equilateral triangle	No.	309				
8.04	806 & IRC:79	Supplying and installation of delineators (road way indicators, hazard markers, object markers), 80-100 cm high above ground level, painted black and white in 4.5 cm wide strips, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and conforming to IRC-79 and the drawing.	No.	5,507				
8.05	803 & 804	Providing and fixing of reflective Pavement marker (Retro studs) installed in concrete or asphaltic surface by drilling and bedded in a suitable bituminous grout or epoxy mortar, all complete as per BS 873 part 4:1973	No.	7,600				

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(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 8 TRAFFIC SIGNS MARKING AND OTHER APPURTENANCES								
8.06	304, 802, 1500 1600, 1700 & 2100	Over Head Signs (Gantry Type) Providing and erecting overhead signs with a corrosion resistant 2mm thick aluminium alloy sheet reflectorised with high intensity retro-reflective sheeting of encapsulated lense type with vertical and lateral clearance given in clause 802.2 and 802.3 and installed as per clause 802.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans and as per IRC:67 including excavation, foundation concrete (M15 & m 20), Reinforcement etc.						
		(A) Truss and Vertical Support	No.	8				
		(B) Aluminium Alloy Plate for Over Head Sign	sq.m	572				
8.07	803	Painting on steel surface Providing and applying two coat of ready mix paint of approved brand on steel surface after through cleaning of surface to give an even shade	sq.m	857.52				
	800	Reinforced cement concrete M15 grade kilometre stone of standard design as per IRC:8, fixing in position including painting and printing etc.						

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 8 TRAFFIC SIGNS MARKING AND OTHER APPURTENANCES								
8.08		(a) Hectometer stones	No.	137				
		(b) Ordinary Kilometer stones	No.	27				
		(c) 5th km Stone	No.	1				
8.09	807 & IRC:25	Reinforced cement concrete M15 grade boundary pillars of standard design as per IRC:25, fixed in position including finishing and lettering but excluding painting.	No.	342				
8.10	IRC-99	Providing Speed Breaker on Minor Roads as per drawing and IRC-99	cu.m	78				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 8 TRAFFIC SIGNS MARKING AND OTHER APPURTENANCES								
8.11	2900	Providing and laying of a reinforced cement concrete pipe duct, 300mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both the ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3m thick layer of granular material free of rock pieces, outer to outer distance of pie at least half dia of pipe subject to minimum 450mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC:98-1997 and approved drawings.						
		i) 300 mm dia (For utility crossing) (3 No's per KM)	m	2,100				
8.12	407	Providing and constructing interlocked concrete paver block M.10 Grade and 80mm thickness complete as per drawing and Technical Specification clause 407, or as directed by the Engineer.	sq.m	18,150				
8.13		Laying of Sand Bedding below paver block complete as per drawings and Technical Specifications.	cu.m	1,271				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 8 TRAFFIC SIGNS MARKING AND OTHER APPURTENANCES								
8.14		Providing & Laying Plain cement concrete complete as per drawing and technical specification						
		i) M-10	cu.m	346				
		ii) M-15	cu.m	461				
8.15	410	Providing & Laying Chequered Tiles complete as per drawing and technical specification. Cement Concrete grade M15 over laid with Precast tiles(M30) (300 mm x 300 mm x 25 mm)	sq.m	18,150				
8.16	Additional Specification A-4	Street Lighting (Providing and erecting street light mounted on a steel circular hollow pole of standard specifications for street lighting, 10 m high spaced 40 m apart, 1.8 m overhang on both sides if fixed in the median and on one side if fixed on the footpath, fitted with sodium vapour lamp and fixed firmly in concrete foundation.)						
		Single Arm	No.	337				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 8 TRAFFIC SIGNS MARKING AND OTHER APPURTENANCES								
8.17	Additional Specification A-5	High Mast Pole Lighting Providing and erecting a high mast pole lighting with 30 m high hot dip galvanised mast designed to withstand forces exerted with wind speeds of 180 km per hour with 3 seconds gust, as per IS:875 (Part 3) - 1978, fitted with a base flange, door at the base of mast with heavy duty internal lock, lantern carriage, suitable winching arrangement for safe working load of 750 kg and high powered electrically driven power tools for raising and lowering of lantern carriage, flexible 8 core electric cable, lightning conductor, earthing terminal, and fixing 2 nos aviation obstruction lights on top of the mast, all complete as per approved design and drawings	No.					
8.17		Electrical connection including cable, control panel etc to all high ways as per instruction of engineer in charge.	LS	1				
		Total of Bill no. 8						

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(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 9. MISCELLANEOUS								
A. BUS BAY/ TRUCK LAY BYE AND JUNCTION IMPROVEMENT								
9.01	201	Cleaning and Grubbing Road Land Cleaning & grubbing road land including uprooting trunk, vegetation, grass, bushes, shrubs, sapling and trees having girth upto 300mm, including excavation & backfilling to the required density, removal of left over stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned with all leads and lifts including removal and disposal of top organic soil not exceeding 150 mm in thickness.	ha	3.08				
9.02	305	Construction of Embankment with Material Deposited from Roadway Cutting. Construction of embankment with approved material with all lifts and leads, deposited at site from Roadway cutting and excavation, road drain and foundation of the structures, graded and compacted to meet requirements of table 300-2, complete as per Technical Specifications Clause 305	cum	31,686				
9.03	305 & 408	Construction of Subgrade and Earthen Shoulders Construction of Subgrade and Shoulder with approved material obtained from borrow area with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2 of MoRTH specification complete as per drawings and Technical Specification Clause 305 and 408.	cum	16,362				

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(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 9. MISCELLANEOUS								
9.04	408	Construction of Median and Island with Soil Taken from Borrow Areas Construction of median and Island above road level with approved material brought from borrow pits, spread, sloped and compacted as per clause 408	cum	794				
9.05	401	Granular Sub-Base with Graded Material (Table:- 400-1) By Mix in Place Method (Grade V) Construction of granular sub-base by providing close graded material, mixing in a mechanical mix plant at OMC, carriage of the mix 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	cum	9,837				
9.06	406	Wet Mix Macadam (Plant Mix Method) Providing laying spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Technical Specifications clause 406 and Table 400-13	cum	6,460				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 9. MISCELLANEOUS								
9.07	502	Prime Coat Providing and applying bituminous prime coat (cationic Bitumen Emulsion SS1 Grade conforming to IS: 8887) on prepared surface of granular base including clearing of road surface and spraying primer at the rate of mentioned in Table 500-3 of Technical Specification using mechanical means.	Sqm	25,841				
9.08	503	Tack Coat Providing tack coat (cationic Bitumen Emulsion RS1 Grade conforming to IS: 8887) using emulsion pressure distributor at the rate mentioned in Table 500-5 of Technical Specification on the prepared bituminous/granular surface cleaned with mechanical broom..	Sqm	61,282				
9.09	505	Dense Graded Bituminous Macadam Providing and laying Dense Graded Bituminous Macadam (With Bitumen VG-30 Garde) with higher capacity batch type HMP using crushed aggregates of specified grading, premixed with bituminous binder at the rate mentioned in supplementary Technical specification, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control, the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 and Table 500-10 complete in all respects.						
		Grading 1	cum	2,584				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 9. MISCELLANEOUS								
9.10	507	Providing and laying bituminous concrete with higher capacity batch type hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder at the rate mentioned in supplementary Technical specification, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 and Table No-500-17 complete in all respects						
		Grading-I	sqm	1,292				
9.11	800 & IRC 35	Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads @250gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level, uniform and free from streaks and holes	sqm	2,081				
9.12	409	Construction of cement concrete kerb with top and bottom width 115 and 165mm respectively, 200mm high in M-20 grade on m-15 grade foundation 150mm thick, foundation having 50mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 409 all complete as per clause 409	m	400				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 9. MISCELLANEOUS								
9.13	2900	Providing, laying and jointing Reinforced Cement Concrete Pipe NP-4 conforming to IS:458 including bedding & headwall as per Drawings and Technical Specifications Section 2900. Culverts with multiple rows of pipes shall be measured as one unit, irrespective of the number of rows.						
		(a) 1200mm Internal Dia.	m	408				
9.14		Solar Blinkers @ Minor Junctions having pole height 3m complete as per drawing and Technical Specifications	No.	52				
9.15		Providing passenger shelters complete as per the Specifications Clause A-1	No.	22				
B. OTHERS								
9.16		Providing and maintaining of furnished base office accommodation including recurring expenses for office maintenance up to as office security (Guard & gardener), stationary, telephone, computer, scanner, Fax Courier, Reports, Documentation, Photocopy, printing, Power Support etc for BSRDCL and his staff complete as per drawing Additional Technical Specifications and Technical specification clause 122.	Month	36				

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BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 9. MISCELLANEOUS								
9.17		(a) Providing and maintaining vehicles for employer including providing driver, POL etc. complete as per technical Specifications Clause 124 (Approx. 3000 km per month), AC Passenger Cars (Scorpio, Innova or Equivalent) not more than three year old at any time	VehicleMonth	120				
		(b) Providing and maintaining vehicles for employer including providing driver, POL etc. complete as per technical Specifications Clause 124 (Approx. 1500 km per month), AC Passenger Cars (Indigo, Dezire or Equivalent) not more than three year old at any time	VehicleMonth	120				
9.18	121	Supply of project records in digital format of Project records in Digital format (DVD, Hard Drive) including colour photographs both in digital format as approved by Engineer and as per Technical Specification Clause 121.	No.	320				
9.19	121	Supply of additional prints of coloured photographs of approved size as per Technical specifications Clause 121.	No.	200				
9.20		Rehabilitation/construction of community building (plinth area basis)	sqm	200				

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(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 9. MISCELLANEOUS								
9.21		Enhancement measures and construction as per type design for well up to required depth and availability of potable water including testing of water as per EMP and direction of Engineer and technical specification.						
		All type of Hand pump -India Mark II or equivalent	Each	89.00				
9.22		Relocation / Enhancement the government structure as per EMP and direction of the Engineer						
		Government structures	Each	11.00				
9.23		Relocation / Enhancement the shrines/temples as per EMP and direction of the Engineer	Each	19.00				
9.24		Monitoring of Environmental Parameters as per EMP and as directed by Engineer						
		(a) Air	sample	48.00				

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiyaganj Road (SH-105) under BSHP-III
(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 9. MISCELLANEOUS								
		(b) Water	sample	44.00				
		(c) Noise	sample	36.00				
		(d) Soil	sample	16.00				
		Total of Bill no. 9						

**Improvement/Upgradation, Widening and Strengthening of Bettiah-Narkatiyaganj Road (SH-105) under BSHP-III
(Contract Package No. BSHP-III (Phase-2)/Pkg-5/SH-105)**

BOQ Item No.	Ref. to MoRT&H/ Tech. Specification	Description of Items	Unit	Quantity	Rate (INR)		Amount (INR)	
					In Figure	In Words	In Figure	In Words
BILL NO. 10 DAYWORK								
10.01		Excavator, face shovel, or dragline including operator, fuel etc upto and including 1Cum	Hour	80				
10.02		Motor grader including operator, fuel etc	Hour	60				
10.03		Crane-5 tonne including operator , fuel etc.	Hour	50				
10.04		Diesel Road Roller or Vibratory Compactor upto 10 Tonne	Hour	70				
10.05		Trucks, or Truck Tipper , or Truck with mounted water tank or truck with crane for removal of accidental Vehicles (upto 10 tonne) including operator , fuel etc	Hour	50				
10.06		Tractor Trolley	Hour	50				
10.07		Labour(semi skilled) for 8 hrs	Nos.	120				
		Total of Bill no. 10						