

# SCHEDULE OF QUANTITY

Name of the Work: Construction of Road Network of the Entire CSIR-CMERI (Old & New) Colony Premises, Durgapur-9.

Item Sl No.	Brief Item Description	Unit	Quantity	Rate [in INR]	Amount [in INR]
1	Cleaning of road by wire brush, spread and air blower to complete removal of sand, silt, clay, small grasses, crushed stone from road surfaces etc and disposal of same at specified location as per the instruction of Engineer-In-Charge.	Sqm	21000	Rs. Rupees.	
2	Providing and laying 50mm compacted thickness bitumen penetration macadam with hard stone aggregate of quality, size and grading as specified by Engg-in charge, with bitumen of suitable penetration grade, including required key aggregate as specified, spreading coarse aggregate with the help of self propelled/tipper tail mounted aggregate spreader and applying bitumen by a pressure distributor and then spreading key aggregate with the help of aggregate spreader complete, including consolidation with road roller of minimum 8 to 10tonne capacity & vibratory roller to achieve specified values of compaction and surface accuracy using coarse aggregate of size 50 to 10mm graded @0.60 Cum per 10 Sqm key aggregate of size 12.5mm graded @0.15cum per 10sqm. With paving asphalt grade VG-10 @50kg/10sqm.	Sqm	500	Rs. Rupees.	
3	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications : On bituminous surface @ 0.50 Kg l sqm	SqM	42000	Rs. Rupees.	
4	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge: 40 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	840	Rs. Rupees.	

Day L. Gupta  
06/01/17

# SCHEDULE OF QUANTITY

**Name of the Work :** Construction of Road Network of the Entire CSIR-CMERI (Old & New) Colony Premises, Durgapur-9.

Item Sl No.	Brief Item Description	Unit	Quantity	Rate [in INR]	Amount [in INR]
5	Providing and laying semi dense Bituminous concrete of 25mm compacted thickness with bitumen of grade VG-30 @5% (percentage by weight of total mix) and lime filler @2% (percentage by weight of aggregate) prepared in Batch type Hot mix Plant of 100-120TPH capacity using stone aggregates of specified grading, premixed with bituminous stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per direction of Engineer-in-Charge.	Sqm	21000	Rs. Rupees.	
6	Brick edging laid lengthwise with half brick depth including excavation, refilling and disposal of surplus earth at specified location as per the instruction of Engineer in- Charge:With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	9500	Rs. Rupees.	
7	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)	Cum	50		
8	Painting of Road Surface marking with adequate numbers of coats to give uniform finish with ready mix road marking paint conforming IS: 164 on Bituminous Surface in White/Yellow shade, including cleaning the surface of all dist, scales, oil, grease and foreign material etc. complete (New work, twoor more coats).	SqM	950	Rs. Rupees.	
	<b>Total</b>				
	<b>Rupees (in words)</b>				

*Bay L. Gupta*  
02/07/17

✓

**CSIR-CENTRAL MECHANICAL ENGINEERING RESEARCH INSTITUTE  
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)  
M.G.AVENUE, DURGAPUR- 713209, INDIA**

**Scope of work & other details**

**06.01.2017**

**NAME OF THE WORK:** Construction of Road Network of the Entire CSIR-CMERI (Old & New) Colony Premises, Durgapur-9.

**A. SCOPE OF WORK:** The scope of work includes the following:

1. Repairing torned off butuminous layers with bituminous penetration macadam of required thickness.
2. Providing and applying tack coat using hot straight run bitumen of grade VG - 10,
3. Providing and laying Bituminous concrete 40 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.
4. Providing and laying semi dense Bituminous concrete of 25mm compacted thickness with bitumen of grade VG-30 @5% (percentage by weight of total mix) and lime filler @2% (percentage by weight of aggregate) prepared in Batch type Hot mix Plant of 100-120TPH capacity
5. Brick edging laid lengthwise with half brick depth
6. Providing and laying in position cement concrete of 1:2:4.
7. Painting of Road Surface marking with ready mix road marking paint conforming IS: 164.

**B. Rates:** The rates has been arrived based on DSR-16 and MR.

**C. Specifications:** CPWD Specification of items of the work for the execution of the said work shall be followed.

**D. Works Manual:** The said proposal has been prepared based on **CPWD Works Manual 2014**.

**E. Guarantee Bond:** The bidder shall submit the guarantee bond in the enclosed prescribed format.

**F. Method:** The method proposed for carrying out the project is Item Rate Contract.

**G. Time:** The estimated time of completion from the date of receipt of work order shall be Two months.

Submitted by

*A.K. Gupta*  
06/01/17

A.K.Gupta  
(AEE, Civil)

**CSIR-CENTRAL MECHANICAL ENGINEERING RESEARCH INSTITUTE  
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)  
M.G.AVENUE, DURGAPUR- 713209, INDIA**

Name of the work: "Construction of Road Network of the Entire CSIR-CMERI (Old & New) Colony Premises, Durgapur-9. "

**LIST OF APPROVED MAKES FOR CIVIL WORK.**

1. The Contractor shall obtain approval from the Engineer-In-Charge before placing order for any specific material or engaging any of the specialized agencies.
2. Wherever applicable. The Engineer-In-Charge may approve any material equivalent to that specified in the tender subject to proof being offered by the Contractor for equivalence to his satisfaction:
3. Unless otherwise specified, in the tender document all the materials which are ISI Marked shall be used in the work and if the ISI marked materials are not available, materials conforming to IS shall be used, and for the materials which are neither ISI marked not conform to IS, the manufacturer's Specification shall be followed.

S. No.	Description	Approved Makes
1	CEMENT	ACC, LAFARGE, ULTRATECH,
2	COARSE SAND	CONFORMING TO ZONE -III
3	Bitumen VG -10 and VG -30	IOCL, BPCL, HPCL
4	Road Marking Paint conforming IS: 164	DULUX, BERGER, ASIAN

*Day L. Gupta*  
86/01/17

**FORMAT FOR GUARANTEE BOND**

This agreement made this ..... day of .....two thousand.....between M/s ..... (hereinafter called the Guarantor of the one part) and the..... (Director CMERI hereinafter called the other part).

Whereas this agreement is supplementary to the contract (hereinafter called the Contract) dated ..... made between the Guarantor of the one part and Government of the other part, whereby the Contractor, inter alia, undertook to render the road works in the said Contract recited, completely damage proof.

And whereas the Guarantor agreed to give a guarantee to the effect that the said road work will remain damage proof for **two years** to be reckoned from the date after the maintenance period prescribed in the contract expires.

During this period of guarantee the Guarantor shall make good all defects and for that matter, shall replace at his risk and cost such Bituminous concrete as may be damaged and in case of any other defect being found he shall render the road work at his cost to the satisfaction of the Engineer-in-charge, and shall commence the works of such rectification within seven days from date of issuing notice from the Engineer-in-charge calling upon him to rectify the defects, failing which the work shall be got done by the Department by some other Contractor at the Guarantor's cost and risk, and in the later case the decision of the Engineer-in-charge as to the cost recoverable from the Guarantor shall be final and binding.

That if the Guarantor fails to execute the road work or commits breaches hereunder then the Guarantor will indemnify principal and his successors against all loss, damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part of the Guarantor in performance and observance of this supplemental agreement. As to the amount of loss and/or damage and/or cost incurred by the CSIR-CMERI, the decision of the Engineer-in-charge will be final and binding on the parties.

In witness whereof these presents have been executed by the Obligor ..... and by ..... for and on behalf of the Director CMERI on the day, month and year first above written.

Signed, sealed and delivered by OBLIGOR in the presence of –

1.

2.

Signed for and on behalf of THE DIRECTOR, CSIR-CMERI by ..... in the presence of.

1.

2.

*Jay L. Gupta*  
26/11/17



Roads except 'X' marked to be done

Way L. Cuyler  
8/10/13

