

Name of work : C.R./F.D.I.R. to various roads under District (R&B) Sub Division (Jambusar Section) (Supplying of Road Materials including spreading and rolling) Tal. Jambusar, Dist. Bharuch.

(SUPPLY OF ROAD MATERIALS)

[Supplying Quarry Materials etc. (Metal, Quarry Spauls, Kapchi, Grit, Rubble etc.)]

SPECIFICATIONS

Item No.1 : Supplying, Spreading and Consolidate with 8 - 10 tonne capacity roller to Machine Crushed metal of 40 mm to 63 mm in size on road side including filling measure boxes etc. complete.

1. The stone metal shall be obtained from quarries approved by the Executive Engineer prior to collections. The metal shall be of approved quality with all leads and lift. The metal shall be obtained from hard tough, sound durable stone of close texture as is locally available and reasonably free from decay and weathering. Pieces of the stone shall be angular and roughly cubical in shape and round elongated or flaky materials shall be allowed. The size of metal shall be **40 mm to 63 mm** and shall be machine crushed. All unsound weathered or disintegrated stone obtained from the upper surface layer of the quarry or other layers of boulders shall be rejected.
2. The samples of metal collected from approved quarries shall be got tested at Government recognized laboratory as may be directed to the contractor at his own cost. The test results shall conform to the standard requirements laid down for metal to be used for W.B.M. work.

3. The physical requirement for standard size metal shall conform to the test results indicated in the Table below :

Type of Const.	Test	Test Method	Requirement
Base	(a) Los Angles Abrasion Value	IS 2386 Part IV	50% (Max)
	Aggregate Impact Value	IS 2386 Part IV or IS 5640	40% (Max) 15% (Max)
	(b) Flakiness Index	IS 2386 Part I	

Frequency of test shall be as per Ministry of Surface Transport.

4. The grading requirements of the metal to be used for W.B.M. shall be as under :

Sr. No.	Size Ranges	Sieve Designation	Percentage by weight passing through the Sieve
1	40 mm to 63 mm	75 mm	100 - 100
		63 mm	90 - 100
		50 mm	60 - 80
		40 mm	0 - 15
		25 mm	0 - 5

The size of metal for W.B.M shall be **40 mm to 63 mm** wherein tolerance limit for oversize shall be up to 10% and that for lower size should be up to 10%.

5. Wherever any doubt exists as to whether the above requirements are satisfied, in whole or any part of the collection, metal shall be got screened by the contractor at his own cost, if so ordered by Engineer-in-charge.

6. Stacking shall be done by filling in the standard steel boxes of 2 m x 1.5 m x 0.5 m size which shall be supplied by the Department if available on rent. Otherwise contractor shall make his own arrangements. No deduction for voids shall be made from the gross measurements. Where any doubt exists as to whether the quantity of stacks of metal in any hectometre is not confirming with the cubical content of the standard pharas (2 m x 1-5 m x 0.5 m) shall be got corrected by the contractor if so ordered by the Engineer-in-charge for which no extra payment shall be claimed by the contractor. If the quantity of metal in any stack in a particular Hectometre shall be paid on the basis of the quantity so found. Regular stacks shall be done by the contractor on a fairly level ground. Stacking of the metal shall be done in a manner as directed by the Engineer-in-charge. Collection of metal shall be completed in two hectometre wise as per the final requirement and measurement shall be recorded two hectometre-wise. Until the quantity of metal as per the final requirement is not collected in any two consecutive IIM and std. boxes are not filled in completely in two hectometres, measurements shall not be recorded and payments shall not be done.
7. For road work complete stacking of metal as per requirement shall be carried out in 2 Km. length before spreading. The metal stacks shall be measured and recorded and got cross checked by other Deputy. Executive Engineer as per rules before spreading. The collection shall always, commence at one end of the Km. and be carried continuously

towards the other end unless the Engineer-in-charge shall direct otherwise.

8. The payment shall be on cubic metre basis without deduction for voids. The contractor shall maintain all stacks in regular and proper size till the whole materials shall not measured and finally accepted by the Department. The spreading of materials shall not be allowed till the materials are fully slacked and completed kilometer wise.
9. The rate includes cost of collection, conveyance to the site with all lead and lift and filling the boxes including all labour, tools, equipment and other incidental expenses. The rates quoted are inclusive of all such tools, duties, fees, royalties, taxes, etc.

Item No.2 : Supplying, Spreading and Consolidate with 8 - 10 tonne capacity roller to Machine Crushed metal of 25 mm to 40 mm in size on road side including filling measure boxes etc. complete.

1. The stone metal shall be obtained from quarries approved by the Executive Engineer prior to collections. The metal shall be of approved quality with all leads and lift. The metal shall be obtained from hard tough, sound durable stone of close texture as is locally available and reasonably free from decay and weathering. Pieces of the stone shall be angular and roughly cubical in shape and round elongated or flaky materials shall be allowed. The size of metal shall be **25 mm to 40 mm** and shall be machine crushed. All unsound weathered or disintegrated stone obtained from the upper surface layer of the quarry or other layers of boulders shall be rejected.
2. The samples of metal collected from approved quarries shall be got tested at Government recognized laboratory as may be directed to the contractor at his own cost. The test results shall conform to the standard requirements laid down for metal to be used for W.B.M. work.
3. The physical requirement for standard size metal shall conform to the test results indicated in the Table below :

Type of Const.	Test	Test Method	Requirement
Base	(a) Los Angles Abrasion Value	IS 2386 Part IV	50% (Max)
	Aggregate Impact Value	IS 2386 Part IV or IS 5640	40% (Max) 15% (Max)
	(b) Flakiness Index	IS 2386 Part I	

Frequency of test shall be as per Ministry of Surface Transport.

4. The grading requirements of the metal to be used for W.B.M. shall be as under :

Sr. No.	Size Ranges	Sieve Designation	Percentage by weight passing through the Sieve
1	25 mm to 40 mm	75 mm 63 mm 50 mm 40 mm 25 mm	100 - 100 90 - 100 60 - 80 0 - 15 0 - 5

The size of metal for W.B.M shall be **25 mm to 40 mm** wherein tolerance limit for oversize shall be up to 10% and that for lower size should be up to 10%.

5. Wherever any doubt exists as to whether the above requirements are satisfied, in whole or any part of the collection, metal shall be got screened by the contractor at his own cost, if so ordered by Engineer-in-charge.
6. Stacking shall be done by filling in the standard steel boxes of 2 m x 1.5 m x 0.5 m size which shall be supplied by the Department if available on rent Otherwise contractor shall make his own arrangements. No deduction for voids shall be made from the gross measurements. Where any doubt exists as to whether the quantity of stacks of metal in any hectometre is not confirming with the cubical content of the standard pharas (2 m x 1-5 m x 0.5 m) shall be got corrected by the contractor if so ordered by the Engineer-in-charge for which no

extra payment shall be claimed by the contractor. If the quantity of metal in any stack in a particular Hectometre shall be paid on the basis of the quantity so found. Regular stacks shall be done by the contractor on a fairly level ground. Stacking of the metal shall be done in a manner as directed by the Engineer-in-charge. Collection of metal shall be completed in two hectometre wise as per the final requirement and measurement shall be recorded two hectometre-wise. Until the quantity of metal as per the final requirement is not collected in any two consecutive IIM and std. boxes are not filled in completely in two hectometres, measurements shall not be recorded and payments shall not be done.

7. For road work complete stacking of metal as per requirement shall be carried out in 2 Km. length before spreading. The metal stacks shall be measured and recorded and got cross checked by other Deputy. Executive Engineer as per rules before spreading. The collection shall always, commence at one end of the Km. and be carried continuously towards the other end unless the Engineer-in-charge shall direct otherwise.
10. The payment shall be on cubic metre basis without deduction for voids. The contractor shall maintain all stacks in regular and proper size till the whole materials shall not measured and finally accepted by the Department. The spreading of materials shall not be allowed till the materials are fully slacked and completed kilometer wise.

11. The rate includes cost of collection, conveyance to the site with all lead and lift and filling the boxes including all labour, tools, equipment and other incidental expenses. The rates quoted are inclusive of all such tools, duties, fees, royalties, taxes, etc.

Item No.3 : Supplying, Spreading and Consolidate with 8 - 10 tonne capacity roller to Stone Dust of approved quality on road side including filling measure boxes etc. complete.

1. Material for the purpose shall be of approved quality. Any material which is found inferior shall be rejected and the contractor shall remove such rejected material from the site at his own cost. The materials shall be collected from quarries approved by the Executive Engineer. The material shall be granular and gritty.
2. The material shall be got approved by the Executive Engineer prior to collection on site. It shall be free from all rubbish, dust and any organic materials as well as clods of black cotton soils. Materials shall not be collected from within the road boundary. Material to be used as crust and for side shoulders shall be as per C.B.R. report and that to be used as bind-age in W.B.M. road construction shall have P.I. value of less than 6 as determined in accordance with I.S. 2720 (Part - V). The material to be used should be got tested prior to its use in road construction. Testing charges shall be borne by the contractor.
3. River or nala or sea sand required for the work shall be clear, sound, properly graded, free from organic materials, silt clay etc. and shall be got approved from Engineer-in-charge. The sand shall be obtained and brought from the source approved by the Engineer-in-charge. The sand shall be well graded.

The payment shall be made on Cubic Meter basis.

4. Stacking shall be done by filling in the standard steel boxes of 2 m x 1.5 m x 0.5 m. size, which shall be supplied by the Department, if available on rent, otherwise, contractor shall make his own arrangements. No deduction for voids shall be made from the gross

measurements. Where any doubt exist as to whether the quantity of stacks of metal in any hectometer is not confirming with the cubical content of the standard pharas (2 m x 1.5 m x 0.5 m) shall be got corrected by the contractor, if so ordered by the Engineer-in-charge for which no extra payment shall be claimed by the contractor, if the quantity of metal in any stack in particular hectometer shall be found to be less than the standard measurements in 1.5 cmt. The entire collection in the hectometer shall be paid on the basis of the quantity so found. Regular stacks shall be done by the contractor on a fairly level ground. Stacking of the metal shall be done in a manner as directed by the Engineer-in-charge. Collection of metal shall be completed in two hectometer- wise as per the final requirement. And measurement shall be recorded two hectometer-wise. Until the quantity of metal as per the final requirement is not collected in any two consecutive H. M. and standard boxes are not filled in completely in two hectometers measurements shall not be recorded and payments shall not be done.

5. For road work, complete stacking of metal as per requirement shall be carried out in 2 k.m. length before spreading. The metal stacks shall be measured and recorded and got cross checked by other Deputy Executive Engineer as per rules before spreading. The collection shall always commence at one end of the k.m. and be carried continuously towards the other end, unless the Engineer-in-charge shall direct otherwise.
6. Payment for this item shall not be done separately as included in consolidated item of full depth repair.