



Delhi Integrated Multi Modal Transit System Ltd.

(A Joint Venture of Govt. of Delhi & IDFC Ltd.)

**Subject: Implementation of BRT Corridor from Ambedkar
Nagar to Delhi Gate.**

**Sub Head: Modification of the junction of SherShah Suri Marg
with BRT Corridor.**

BID DOCUMENTS

VOLUME 2

TECHNICAL SPECIFICATIONS

BILL OF QUANTITY

Delhi Integrated Multi-Modal Transit System Ltd.

(A Joint Venture of Government of Delhi & IDFC Ltd.)

Kashmere Gate, Delhi-110006

TECHNICAL SPECIFICATIONS

- 1.0 The work shall include supply of all materials and ingredients for construction, erection/installation at site, commissioning/performance of desired function, handing over of works to the designated persons.
- 2.0 The work shall include providing scaffolding wherever required as well as necessary measures to be taken for the safety of the workers and the passer byes.
- 3.0 Works shall be carried out at all heights and at all depths/levels.
- 4.0 The item of works curing and bonding arrangement by way of application suitable components on junctions of old and new materials.
- 5.0 Works shall be carried out without disrupting the supply of municipal/other services and shall include making temporary arrangements for continuance of water, drainage, sewer, electricity, telecom/communication, gas etc to the occupants during the construction period.
- 6.0 Concreting shall be done with all safety precautions as the work is to be done in important area, which has large volume of vehicular & human traffic movement.
- 7.0 Contractor shall maintain all environmental protection norms during entire construction & safety precautions.
- 8.0 As per provisions of contract, Cement of OPC 43 grade is permissible. However under special conditions i.e. In case of non availability of same cement 53 grade shall be allowed without any additional financial implication.

- 9.0 The contractor/agency has to ensure that all necessary safety measures other than specified in the items is provided without any additional cost for smooth execution of works.
- 10.0 All items of works shall be executed in accordance with the drawings and technical specifications enclosed in part – I of tender.
- 11.0 SW pipes, RCC pipes GI/CI pipes dismantled /retrieved during construction work shall be disposed off as per instructions of the site in-charge. The rates may be quoted after considering the same. No additional payments shall be made for dismantling and shifting of these pipes/materials.
- 12.0 Agency/contractor has to work in co – ordination with the telecom operators/service providers and provide necessary assistance in relocation of their services. No extra payments shall be made on this account by owner.

Bill of Quantities

Subject :- Implementation of BRT Corridor Ambedkar Nagar to Delhi Gate.

SH:- Modification of the junction of SherShah Suri Marg with BRT Corridor.

S.No	Description of Item	Qty	Unit	Rate in Figures	Rate in words	Amount (in Rs.)
Part-A						
1	Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	75	m			
2	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	60	Sqm			
3	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge					

S.No	Description of Item	Qty	Unit	Rate in Figures	Rate in words	Amount (in Rs.)
	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	15	Cum			
4	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.					
	All kinds of soil	20	Cum			
5	P/L cement concrete – all works upto plinth level.:					
	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	15	Cum			
6	Laying at or near ground level old kerb stones of all types in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement : 3 coarse sand) including making joints with or without grooves (thickness of joints, except at sharp curve, shall not be more than 5mm) including making drainage opening wherever required etc. complete as per direction of Engineer-in-charge. (Length	30	m			

S.No	Description of Item	Qty	Unit	Rate in Figures	Rate in words	Amount (in Rs.)
	of finished kerb edging shall be measured for payment). (Old kerb stones shall be supplied by the department free of cost)					
7	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand) including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	3	Cum			

S.No	Description of Item	Qty	Unit	Rate in Figures	Rate in words	Amount (in Rs.)
8	Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting, mechanically by using needle and surface vibrators, levelling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/ expansion, construction & longitudinal joints (10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately)					
	Cement concrete manufactured in automatic batching plant (RMC plant) //c transportation to site in transit mixer.	20	Cum			

S.No	Description of Item	Qty	Unit	Rate in Figures	Rate in words	Amount (in Rs.)
9	Extra for providing richer mixes at all floor levels. Note:- Excess/less cement over the specified cement content used is payable /recoverable separately. Providing M-40 grade concrete instead of M-25 grade BMC/RMC.(Note : Cement content considered in M-40 is @ 360 kg/cum).	20	Cum			
10	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade: Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	110	Sqm			

S.No	Description of Item	Qty	Unit	Rate in Figures	Rate in words	Amount (in Rs.)
11	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour ,T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	415	Sqm			
12	Carriage of materials by mechanical transport including loading, unloading and stacking lead of 15 Km Lime, moorum, building rubbish	45	Cum			
	Sub Total Part-A					
Part-B						
1	Providing and applying tack coat with bitumen of grade VG-10 :					
	On bituminous surface @ 0.50 Kg / sqm	1200	Sqm			

S.No	Description of Item	Qty	Unit	Rate in Figures	Rate in words	Amount (in Rs.)
2	Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/25 conforming to IS : 702 prepared by using mastic cooker and laid to required level and slope including providing antiskid surface with bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximates spacing of 10cm centre to centre in both directions, pressed into surface protruding 1mm to 4mm over mastic surface, including cleaning the surface, removal of debris etc. all complete. (Considering bitumen using 10.2% as per MORTH specification.) 25mm thick.	1200	Sqm			
	Sub Total Part-B					
	Grand Total (Part-A + Part-B)					



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- Subject:** Implementation of BRT Corridor from Ambedkar Nagar to Delhi Gate.
- Sub Head:** Repairs to depressions and rough patches in the bituminous road surface from Ambedkar Nagar to Delhi Gate on BRT Corridor.

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VOLUME 2

TECHNICAL SPECIFICATIONS

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Kashmere Gate, Delhi-110006

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Bill of Quantities

Subject : Implementation of BRT Corridor From Ambedkar Nagar to Delhi Gate
S.H. : Repairs of Depressions and Rough Patches in Bituminous surface on BRT Corridor Ambedkar Nagar to Delhi Gate

S. No.	Details of item	Qty	Unit	Rate in Figures	Rate in Words	Amount
1	Carriage of Materials By Mechanical Transport including loading, unloading and stacking complete for lead up to 20 km.	100.00	Cum			
2	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./ sqm.	9650.00	Sqm			
3	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge. 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix)	724.00	Cum			

Repair of Depressions and rough patches on BRT Corridor

Volume-2

4	<p>prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.</p> <p>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.</p> <p>40/ 50 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.</p>	386.00	Cum		
Total					