

## CHAPTER – 1

### Sector background context and Broad Project Rationale

#### 1.1 Existing status of the physical infrastructure

- The existing KSRTC Mofussil Bus Station (MBS) is situated opposite to Public Gardens in the heart of city. Total sital area of the MBS is about 4 acres 31 guntas (19328.371 Sq.mt. or 208048.653 Sq.ft) and is in the prime location. At present there is one main terminal building with RCC roof. This is the centrally located bus stand serving the transport needs of the community from where most to the moffusil services and city services are operated to all destinations. The KSRTC Offices and one restaurant in addition to shops etc are located in this building. There are no parking facilities for 2 wheelers and cars. Frequency of bus services are on a very higher side of 1687 in a day. Consequent to the heavy traffic congestion Upgradation of City Bus Station with all amenities is proposed. It is also on the main BRTS corridor proposed now which connects CBS, MBS and Sathagalli.
- KSRTC is operating regular services which includes moffusil services inter city, intra city and interstate. Also city services in variably passes through this moffusil bus station.

Arrival / Departure per day : 3327

Projected No. of trips / services per day  
(by the year 2025) : 6180



## 1.2 Base line information in terms of user coverage and access

Area of the city	: 128.42 Sq.m
Height (MSL)	: 770 Mtrs.
Latitude	: 12.18 North
Longitude	: 76.39 East
Population of Mysore city census year 2001)	: 7,87,179
Population of Mysore District	: 26,41,027
Population Growth (2001 census)	: 20.48
No. of Taluk in the District	: 7
No. of Constituency in the District	: 7+4 = 11 Nos.
No. of LA Constituency in the city	: 4
No. of wards	: 65
No. of Corporaters	: 65
Present population (year 2007)	: 9,00,000
Projected Population (year 2020)	: 16,00,000
Floating population including tourists	
Normal seasons	: 2,00,000 to 5,00,000
During Dasara seasons	: 10,00,000
Existing population below poverty line	: 2,46,617
Number of notified slums in the city	: 49 nos.
No. of un-notified slums	: 31 nos.
Total slums	: 80 nos.
No. of huts	: 9386
Total slum population	: 48,075
No. of schools	: 60 nos.
No. of colleges	: 23 nos.
No. of other institutions (Engineer Colleges, Medical colleges, Dental colleges and Polytechnic etc)	: 15 nos.
Approx. no. of students	: 2,00,000
No. of industries/handicrafts	: 26 nos.
No. of Hospitals including private nursing homes	: 19 nos.
Approx. labour population	: 2,50,000
No. of cinema theaters	: 36 nos.
No. of hotels / restaurants	: 60 nos.:
No. of KSRTC buses	: 1000

No. of Private buses	:	300
No. of Passenger carried by KSRTC/day		
In city services	:	2,00,000
In moffusil services	:	1,90,000
No. of Passenger carried by private buses/day	:	40,000
No. of vehicle registered in RTO upto 2006:		3,67,626
No. of Auto rickshaws	:	14,677
No. of Maxicabs	:	697
No. of Tempo travels	:	1615
No. of Jeeps	:	945
No. of Tangas	:	174
No. of Two Wheelers	:	2,79,351
No. of Cars	:	31,486
No. of tourist vehicles coming per day	:	300 to 500
No. of Government Employees	:	35,000

#### Accident details of last 5 years

Year	Fatal	Non fatal	Total
2002	89	481	570
2003	77	514	591
2004	96	613	709
2005	105	765	870
2006	151	752	903

#### Increase of fleet strength of KSRTC in the last

5 years (for 4 depots in Mysore city only):	01 – 02 --- 545
	02 – 03 --- 535
	03 - 04 ---- 539
	04 - 05 ---- 593
	05 – 06 --- 657

### 1.3 List of various projects proposed for the sector in the City Development Plan

1.3.1 Transport Development Plan prepared by RITES includes 12 projects for improvement to Transport Infrastructure in Mysore city. Under this BRTS is planned in Mysore city in the following corridors

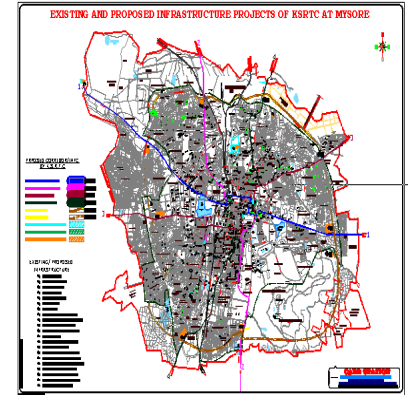
**Corridor - 1 : Iiwala to Mellahalli**

**Corridor - 2 : KRS Road to Kadakola**

**Corridor - 3 : Bogadi to Mahadevapura**

**Corridor - 4 : Srirangapatna to H.D.Kote**

**Corridor - 5 : Outer Ring Road**



Under I-phase 8 projects are to be taken up and Upgradation of MBS is one. It is very close to the main BRTS corridor No.1. Many improvements have to be made in the city transport infrastructure to meet the continuous demand in this sector. A rapid increase in city traffic and congestion are noticed which requires immediate solutions. This will serve the objective and priority in Transport Infrastructure implementation strategy.

This project implementation is in compliance with National Urban Transport Policy. The usage of personalized modes such as two wheels and cars are to be discouraged and the public transport system such as Bus / Train travel within urban area to be encouraged.

**1.4 List of other capital expenditure projects supported by other schemes for the sector (sanctioned projects that have yet to commence as well as ongoing projects)**

NIL- Not applicable

**1.5 Existing tariff and cost recovery methods and extent of cost recovery**

KSRTC is getting monthly rent of Rs. 8,82,000/- per month from commercial /office establishment. The cost is fully recovered

**1.6 Existing areas of private sector / community participation in the sector for design, construction, project management and / or O&M services (including billing & collection)**

Sl.	Items	DPR	PMC
1	Up gradation of KSRTC bus stations under its jurisdiction	Consultant	Consultant
2	Design of new KSRTC bus stations under its jurisdiction	Consultant	Consultant

All construction works will be awarded to registered PWD contractors who were qualified and other government agencies on tender basis following the transparency act.

**1.7 Any other qualitative information (eg list of key issues that are of importance to this sector and project; importance of the project to the sector, extent to which the project would address key issues/problems of the sector etc.)**

There is marked demand for public transport in the city during this decade. The present MBS is the nuclei of the entire transport system in the city. The community should feel that they have all the essential services available at one place so that their movement for each service to different locations is reduced to minimum. The upgradation of MBS will have the facilities such as sufficient waiting platforms and computerized dynamic information boards/ digital display showing the frequency and timings of departure and destinations of buses etc are provided. Latest electronic equipments will ensure safety and security of passengers, vehicles and the infrastructure. In addition facilities such as parking for two wheelers and cars, rail/air reservations, Auto/Taxi stand, tourist guidance centre (KSTDC), restaurant and refreshment stall, shopping centre / super bazaar, library, fruit and vegetable stall, TV waiting lounge, security cabin, yatri nivas (rest house), Post Office/Bank/ATM, dormitories, creches, crew rooms, staff rooms, bath and toilets, wash rooms, Police Chowky, cloak room etc., will be available at a single location so that the passengers can use these amenities in an effective way for their daily needs and save time. This will facilitate the public transport more meaningful in serving the community.

## CHAPTER – 2

### Project Definition, Concept and Scope

#### 2.1 Land

Total sital area of MBS including the existing main station building is about 4 acres 31 guntas (19328.371 Sq.m. or 208048.653 Sq.ft.). The entire ownership of the land is with KSRTC and in its full pocession. There is a compound wall enclosing the area all-round. The access to this land is only through entry and exits. This land is earmarked in the CDP for the development of transport infrastructure. Property documents are enclosed in Annexure -6

#### 2.2 Physical infrastructure components

It is proposed to construct upgradation of MBS in the above site. This MBS is a two storied building with basement floor and Ground floor. It is proposed to have all essential facilities / services in this transit center which will help the bus passengers / commuters to feel that they can get all of them at a single point.

The various components provided are :

The main terminal building is a framed structure with two stories on the existing ground floor. In addition basement floor is also planned at right corner. Total area is of 21,066.01 Sq.m. The details are as follows :

##### Area

Sq.m	Basement Floor	:	837.43
	(Two-wheeler parking)		
Sq.m	Ground Floor	:	4,638.98
	(Mixed use)		

Sq.m	First Floor (Office/KSRTC)	:	7,794.80
Sq.m	Second Floor (Passenger facilities)	:	7,794.80
<hr/>			
	<b>Total area</b>	<b>:</b>	<b><u>21,066.01</u></b>

**Sq.m**

- The proposal ensures proper passenger movement without criss crossing bus movements is provided. This MBS is provided with spacious bus boarding and alighting platforms with modern dynamic information displays.
- The entry and exit to the MBS from the main road is considered as per traffic movement plan. The MBS complex is designed by considering the next 20 years growth (year 2027) and also peak hour demand and peak day demand. Facilities for auto-rickshaw stand/ Taxi stand are provided at the entrance.
- Only one entry and one exit point with good turning radius for easy movement of buses are provided. Sufficient number of bus bays with digital signage boards indicating the frequency, departure time, origin and destination of buses are provided. Intelligent Transportation System (ITS) components such as GPS, operation management, passenger information, safety and security information are also provided.

- The basement floor having 837.43 Sq.m provides sufficient space for parking 101 two wheelers and 18 cars. Ground floor with 4,638.98 Sq.m, First & Second floors with 7,794.80 Sq.m. area each can accommodate the required offices and other administration units of KSRTC and passenger amenities such as post office, bank / ATM, waiting lounge, restaurant and refreshment stalls, cloak rooms, mini shopping centers / super bazaar, fruit and vegetable stalls etc. It is proposed to have dormitories, crew rooms, crèches, staff rest rooms with bath and toilets, library, yathri nivas (guest house/ rest rooms) etc.
- The terrace will be used for providing water storage tanks, solar heater and lighting equipments. The solar energy will be used partly for heating and lighting purpose to minimize the use of electrical energy. Part of the terrace will be used for terrace garden.
- Rain water harvesting and ground water recharging is proposed in the premises. The rain water that drains from terrace and pavement in the premises will be collected in the under ground sumps. This water will be used for maintenance of the garden and for other non domestic purposes. Provision is also made for sustainable and portable water source from borewells. Ground water recharging arrangements are also proposed in the form of recharge pits near and around the borewells by recycling the waste water.

## 2.3 Environmental Compliance / Protection measures / improvement measures

### 2.3.1 Environmental impact assessment

Environmental impact assessment was made with respect of the following hazards and suitable mitigation measures are suggest to satisfy the environmental compliance.

- **Pollution of air:** Pollution of air beyond the tolerable limits causing health problems such as respiratory disorders, cardiac and intern impact of these problems on the human body as a whole.
- **Sanitation problems:** Insufficient no. of urinals and bath rooms will force the people to use the vacant places / corners in and around the bus terminals. This is the most dangerous situation that is most common in almost all the bus terminals.
- **Noise pollution:** The increased fleet strength and unskilled driving creates noise pollution in and around the bus terminals.
- **Visual Pollution:** Due to heavy traffic and bad road surface the flow of traffic emits the dust around the bus terminals. This type of dust emissions gets deposited on the structures such as buildings, canopies, compounds, vehicles, trees, water body spoiling the aesthetic beauty of the area.
- **Solid waste:** Heavy movement of people generates more solid waste. Collection and disposal is a major issue. This solid waste spoils the aesthetic beauty of

the entire bus terminal. The continuous delay in cleaning and collection of such solid waste in bus terminal, leads to decaying and finally it emitting stinking bad odour creating nuisance and health hazards.

### 2.3.2 Environmental management plan

- **Air Pollution:** The air pollution as to be controlled by the following methods:
- By using Carborators manufacture with latest advanced technologies
- Frequent maintenance of the vehicles specifically for the environmental compliances.
- By checking the usage of fuel and by giving proper training to the drivers about the ill effects of air pollution.
- It's proved that each adult tree produces 0.25 to 0.5kg of oxygen every day depending upon the coverage of foliage in the tree. This excess production of oxygen will purify the air polluted by the vehicular emissions. On the other hand the trees consume CO<sub>2</sub>, for their photosynthesis during the manufacturing of their food which, intern consumes by excess production of CO<sub>2</sub> produced by the vehicles. Therefore tree plantation is suggested in and around the premises of the proposed IMTC in sufficient numbers.
- **Electronic sign boards** depicting the level of noise and air pollution are to be installed in the premises to monitor the same at permissible levels

It is also suggested not to plant any trees in the south-west and North-east corners of the bus terminal in order

- to make provision for the free movement of air, so as to enable it to carry the smooth smoke produce from the bus terminal area. This is because the general wind direction in the city of Mysore is South-west to North-east and vice versa.
- Similarly no buildings will be constructed in the north-east and south-west direction which will block the free flow of the wind. The bus bays are oriented in such a way that the wind will flow on these bus bays directly. The buses and other vehicles such as Autos, cars will be regularly checked for the quality of the vehicular emissions. The entire bus terminal area will be washed with water regularly so as to take away the dust collected in the bus terminal which other wise get mixed in to the air during the movement of the vehicles.
  - **Water Pollution:** The surface water from the bus terminal area will not be allowed to go out and it will be arrested by rain water harvesting methods inside the bus terminal only. Otherwise, it can be used for sanitary flushing and gardening purposes. The remaining water will be allowed for percolation in to the ground around the borewells in the premises for ground water recharging.

Only storm water will be allowed in the open drains. The waste water and sewerage has to be connected to the existing underground drainage system.

Safe drinking water facility is to be provided at suitable locations sufficiently away from the toilets in order to enable the public to use them without any psychological feelings.

- **Sanitary Problems:** To avoid the problems arising from insufficient sanitary facilities, sufficient numbers of urinals, toilets and bathrooms which are easily accessible to one and all is planned. Similarly wash basins will be provided in sufficient numbers. They have to be maintained hygienically. The sullage water from bathrooms and wash basins after required treatment can be recycled for using in toilets or for maintaining the gardens. No water will be allowed to stagnant which becomes the mosquito breeding center causing spreading of diseases and pollution of air water and earth.
- All the toilets will be connected with pakka water proof and durable materials to the public UGD lines. The entire bus terminal area will be concreted with water proof material to avoid percolation of dirty water and to have smooth movement of the vehicles.
- **Noise Pollution:** The State Pollution Control Board, and Road Transport Corporation (RTO) are the concerned organizations to control and regulate the noise pollution. They will be requested to depute there staff specifically to check the noise pollution near the bus terminals. The noise level will not exceed 55dB during night time and 75dB during day time.
- **Visual Pollution:** Sufficient staff will be appointed and they will be monitored well to clean the bus terminal every now and then so that no solid wastes is allowed to spread for more time in the bus terminal area.

- **The problems due to solid waste:** An area of 10feet X 20feet has been proposed to collect the entire solid waste generated inside the bus terminal area. It is proposed to keep the dustbins sufficiently in the premises in such a way that the commuters throw the waste easily into the dustbins.
- The solid waste bin constructed in a corner of the premises with bricks or stones will be concreted with good finishing and drainage facility. These bins will be washed every day and the waste water so generated will be treated along with other wastewater for recycling.
- Also it is suggested to use only solar energy for lightening, heating and pumping of water inside the bus terminal as far as possible so that the natural energy which is sustainable in nature and most economical in the long run among all type of energies available.

#### **2.4 Rehabilitation and Resettlement**

Rehabilitation and resettlement do not arise in this project since the entire site property is a compact one with no habitations/settlements.

#### **2.5 Specialized procured services for design, independent supervision and quality assurance.**

- The project now proposed to be taken up under JNNURM fund is entrusted to M/s. Span Consultants Pvt. Ltd., Bangalore for planning and design purpose

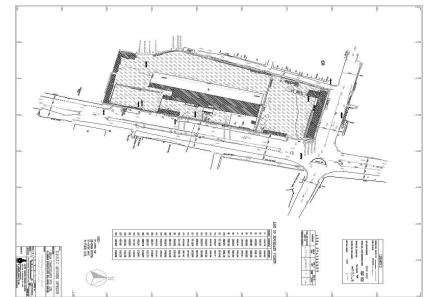
- which includes preparation of Detailed Project Report as per the norms. This entrustment includes preparation of tender documents, preparation of prequalification documents, prequalification of contractors, preparation / modification of tender documents and BOQ
- Floating of tenders and tender evaluation, fixing of agency will be under taken by the technical staff of KSRTC.
  - For construction supervision and quality assurance etc. project management consultants will be appointed for the timely implementation of the project under the over all supervision of KSRTC.

## **2.6 Other information's**

### **2.6.1 Details of surveys and investigations required to be carried out ( site, customer etc.)**

#### **2.6.1.1 Topographic surveys**

Detailed topographic surveys were conducted for the site area and the surrounding roads using total station equipments. The topography of the ground is gently slopping from south to north and west to east. The ground fall is about 3 meters in a stretch of 120 meters. Also contour plan of the site area is also got up at intervals of 0.5 meters is prepared.



#### **2.6.1.2 Geo technical investigation**

Detailed report is enclosed in Annexure- 3.

### 2.6.1.3 Traffic Survey & Analysis

Detailed report is enclosed in Annexure - 4.

### 2.6.1.4 Market Survey

Detailed report is enclosed in Annexure - 5.

### 2.6.2 Assessment of requirements related to utilities shifting

The proposed project is to be implemented within the premises of existing MBS bus station. There are no utilities within the premises that requires shifting.

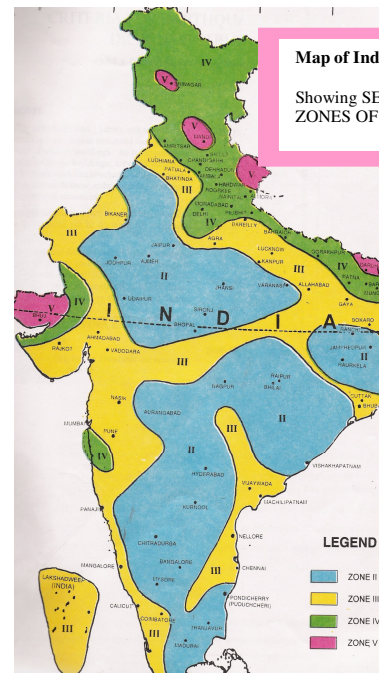
### 2.6.2 List of clearances and agencies from which these are to be obtained

Do not arise in view of Para 2.6.2

### 2.6.4 Disaster related risk assessment and broad countermeasures (including earthquake/other natural disaster resistant design of structure)

MBS area is situated in a fairly elevated location and having good drainage system. Flooding of area during monsoons are not occurring. Also the existing storm water drains in and around the bus terminal area is effective in disposing the storm water.

As per the map of India (part) showing seismic zones of India in IS:1893 (part-I):2002 Mysore comes under zone II with zone factor Z as 0.10.



For the design of Upgradation of MBS care is taken by considering the effect of seismic forces as per IS:1893 (Part-I) : 2002. “Criteria for Design of earthquake resistant design of structures - general provisions and buildings”.

## CHAPTER – 3

### Project Cost

#### 3.1 Land acquisition / Site development

- The land is in the possession of the KSRTC and at present it is an existing Mofussil bus terminal. As such land acquisition does not arise.

#### 3.2 Physical infrastructure component wise cost

Sl. No.	Description	Amount (Rs.)
<b>1</b>	Basement and foundation	4,31,74,197 /-
<b>2</b>	Ground floor	303,45,921 /-
<b>3</b>	First floor	198,99,288 /-
<b>4</b>	Second floor	2,43,67,310 /-
<b>5</b>	Terrace floor	28,69,631 /-
<b>6</b>	Compound wall	10,52,521 /-
<b>7</b>	External Civil Works (Elevation Works)	1,24,70,079 /-
<b>8</b>	Providing, fixing & commissioning of lifts	16,00,000 /-
<b>9</b>	Road works including pedestrain paths	2,01,03,554 /-
<b>10</b>	Development & Landscaping	2,60,550 /-
<b>11</b>	Dismantling of Existing Building	26,61,857 /-
<b>12</b>	Internal & external Electrical Works including HT & LT Electrical works, yard lighting and MESCOM Deposits and Solar	1,13,45,676 /-
<b>13</b>	Sanitary works including UGD connections	57,85,263 /-
<b>14</b>	Water supply works including Sumps, OHTs, Borewells & cost of pipe etc	
<b>15</b>	Drainage works (Storm water drain)	
<b>16</b>	Provision for rain water harvesting, settling tank, bore well, etc	
<b>17</b>	Provision for Environmental Compliance Arrangements	
	<b>Total</b>	<b>17,59,35,847 /-</b>
<b>18</b>	Miscellaneous items such as utility shifting ITS, PIS, license fee and others	41,74,079 /-
	<b>Total</b>	<b>18,01,09,926 /-</b>

### **3.3 Environmental compliance cost**

Environmental compliance cost includes provision for planting trees in the premises, providing dust bins at visual positions and collecting platforms for solid waste collection, and mobile emission testing equipments etc. Cost towards this amounts to Rs.10 lakhs providing toilets, urinals, bathrooms and connecting to UGD are included under main estimate. In addition rain water harvesting and solar heating and lighting system is considered under separate heads.

### **3.4 Rehabilitation & resettlement cost (to be borne by ULB / parastatal / state government)**

- NIL

### **3.5 Cost of surveys & investigations**

- included under consultancy fee/misc. items in para 3.7

### **3.6 Cost of consultancy services/ Misc. items :**

(a) Design (b) Supervision (c) Quality Assurance (d) misc. items are included in the main estimate

### **3.7 Other statutory compliance costs if applicable**

- Building license fee for Mysore City Corporation has to be paid – Provision of lum sum fee of Rs.1.00 lakhs is made towards this.

### **3.8 Finance/interest cost during construction**

Construction Period: 18 months (Bar chart / Pert chart is enclosed)

Budget for First year : 1200.60 lakhs

Budget for 6 months : 600.30 lakhs

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### **3.9 Any Other**

NIL

## CHAPTER – 4

### **Project Institution Framework (for construction)**

#### **4.1 Roles of different institutions involved in the construction phase of the project**

KSRTC is a State Government undertaking which works directly under Ministry of Transport, Government of Karnataka.

Karnataka Urban Infrastructure Development & Financial Corporation (KUID&FC) is a nodal agency for the implementation of projects under JNNURM.

#### **4.2 Manner of undertaking construction works**

Once the DPR is approved and sanction is accorded, tenders will be floated after short listing of eligible contractors. After tender evaluation, the agency will be fixed for the construction phase.

Over all supervision of the construction phase will be by the technical wing of KSRTC. However, Consultants will be appointed for project management and quality assurance.

#### **4.3 Involvement of the construction entity in the subsequent O&M activities**

Civil Engineering Department under KSRTC which is well equipped with technical staff is capable of managing O&M activities.

#### 4.4 Areas of involvement of the private sector in the construction phase

i	Project Feasibility Study	M/s. Span Consultants Private Limited, Bangalore
ii	Project Engineering Design	M/s. Span Consultants Private Limited, Bangalore
iii	Specialized Surveys	M/s. Span Consultants Private Limited, Bangalore
iv	Construction Works	Private Agency to be fixed
v	Supervision Consultants	Private Agency to be fixed
vi	Quality Assurance Consultants	Private Agency to be fixed
vii	Any other Please Specify (Eg: Equipment Lease)	-

#### 4.5 Construction ‘Packages’ for works construction

Project implementation planning: Package-wise contracting relationships		
List : tender packages		Cost
Package No.	Package Description	Estimate
Only one package	The work of Upgradation of MBS includes construction of additional floors (1 <sup>st</sup> & 2 <sup>nd</sup> floors) over existing ground floor, including extension of building with basement floor, construction of roads, footpaths, landscaping, electrification, providing water supply and sanitary services, fire protection services etc. complete.	Rs.1801.00 Lakhs (Rupees Eighteen Crores One Lakh only)

**CHAPTER – 5**  
**Project Financial Structuring**

**5.1 Over all financial structuring of the project**

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sn	Govt	Project contribution source	Amount (Rs. Lakhs)	% Share by specific source	% share by govt. entity	Remarks on when and how state and ULB shares would be arranged
1	Central	ACA Grant	1801.00 lakhs	80%	1440.80 lakhs	Not applicable
2	Karnataka State Govt	Grant towards its share in project		10%	180.10 lakhs	-
3		Loan taken by state Govt towards its share in project	-	-		-
4	KSRTC	Devolved funds	-	-	180.10 lakhs	-
5		Own surplus resource		10%		
6		Debt/Term Loan taken from State Govt.				
7		Debt/Term Loan taken from bank/F1				
			<b>Total amount</b>	100%	<b>1801.00 lakhs</b>	

**5.2 Review of options for**

- Institutional debt or : nil
- Private sector participation : nil

## CHAPTER – 6

### Project Phasing

#### 6.1 Schedule of tendering / selection for procurement of services :

##### (i) Construction of contractors

Action will be taken within 30 days of CSMC approval. As per Annexure 2, details will be forwarded for acceptance.

Annexure 2 : Project implementation planning : package wise contracting relationship

The whole project is considered as only one package.

Project implementation planning: Package-wise contracting relationships					
	Contract type	Cost (Rs. In lakhs)	Tendering		Completion
Package Description	Unit rate/turnkey /percentage/ others	estimate	Release date (month & year)	Award date (month & year)	Scheduled date (month & year)
Construction of Inter Modal Transit Center (includes construction of main terminal building with basement, ground floor and three floors), construction of roads, footpaths, landscaping, electrification, providing water supply and sanitary services, fire protection services etc. complete.	Unit rate	1801.00 lakhs	As per Tender Notification	As per Tender Notification	As per Tender Notification (18 months including monsoon period)
	<b>Total</b>	<b>1801.00 lakhs</b>			

**(ii) Consultants / firms for supervision and quality assurance**

Action has already taken to award the supervision and quality assurance to the consultants.

**(iii) Consultants / firms for any other specialized activities that has to be carried out to fine-tune DPR/undertake CSMC directed inclusions based on in-principle project approvals (eg. additional surveys, design activities etc as applicable)**

M/s. Span Consultants Pvt. Ltd., Bangalore who are the consultants for preparation of DPR has agreed for undertaking any other specialized activities that has to be carried out to fine-tune DPR/undertake CSMC directed inclusions based on in-principle project approvals (eg. additional surveys, design activities etc as applicable) (Refer Annexure 2).

**6.2 Schedule for bringing in State level and ULB level contributions to the project**

Compliance will be as per Annexure 3 of DPR preparation tool kit JNNURM

S No.	Source	FY 07-08					FY 08-09		
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Total
		Scheduled month & amount (Amount in lakhs)					Scheduled month & amount		
<b>1</b>	<b>GOI</b>	240.13	240.13	240.13	240.13	<b>960.52</b>	240.13	240.13	480.26
<b>2</b>	<b>State</b>	30.01	30.01	30.01	30.01	<b>120.04</b>	30.01	30.01	60.02
<b>3</b>	<b>KSRTC</b>	30.01	30.01	30.01	30.01	<b>120.04</b>	30.01	30.01	60.02
	<b>Total</b>	<b>300.15</b>	<b>300.15</b>	<b>300.15</b>	<b>300.15</b>	<b>1200.6</b>	<b>300.15</b>	<b>300.15</b>	<b>600.30</b>

### 6.3 Schedule of obtaining all clearances (along with list of major clearances)

Obtaining municipal license from Municipal Corporation, Mysore and Mysore Urban Development Authority (MUDA), Mysore.

### 6.4 Schedule of shifting utilities

Nil

### 6.5 Project infrastructure component-wise implementation

Bar chart for key activities – construction period : 18 months including monsoons.

SI No	Details	Q1	Q2	Q3	Q4	Q5	Q6
1	Site clearance & Completing of foundation work and basement floor	■					
2	Completing 1 <sup>st</sup> floor, & 2 <sup>nd</sup> floor		■				
4	Electrification, water supply and sanitary works				■		
5	Finishing works of building, road pavement works, landscaping, rain water harvesting, fixing lifts, providing solar heaters and lighting equipments etc.					■	

## CHAPTER – 7

### Project O&M Planning

#### **7.1 Institution framework (organization & operations) strategy**

##### **7.1.1 The institution to be engaged in the O&M of the created infrastructure asset/enhanced infrastructure assets.**

The KSRTC generally involve their inhouse team for O&M of their assets. If necessary outsource a few essential items of works such as day-to-day sanitation and allied works.

##### **7.1.2 Brief outline of the existing method of billing & collection (including user/customer-segment wise differentiated strategy, if any)**

The civil engineering department of the KSRTC follow the method of Public Works Department in exercising these duties as per the P.W.D. code. The revenue section of the KSRTC operates the billing and collection duties through its inhouse team.

##### **7.1.3 Select performance metrics in regard to billing & collection (for the most recent completed financial year, and if possible, for the current quarter of the ongoing financial year)**

The details of assumptions and calculations have been given in the financial viability.

**7.1.4. Brief description/analysis of the key issues and obstacles in regard to O&M (including billing/collection issues) and proposed counter measures to overcome them for the sector in general and for the project in particular.**

The key issues and obstacles are generally day-to-day maintenance like water supply, sanitation and electricity. This is being overcome by outsourcing to professional agencies on annual basis or piece work basis. The building maintenance is generally done annually by entrusting to the registered contractors under the supervision of the Department. Petty repairs will be taken care by the Department by engaging skilled and unskilled labours as and when required.

**7.1.5 The scope for private entity to be involved in defined aspects of O&M for any specific/all components of the infrastructure asset.**

The scope of private entity is minimum since the inhouse technical team in KSRTC Department itself would mainly be involved in maintenance of the building. This is more feasible than outsourcing.

**7.2 Tariff and User cost recovery**

The details of assumptions and calculations for the tariff and user cost is shown in the financial viability chapter no. 8 and the O&M costing is enclosed as an annexure.

## CHAPTER – 8

### Project Financial Viability & Sustainability

#### 8.1 Overall project perspectives:

##### 8.1.1 Project Cost

The Total Project Cost for the bus terminal is **Rs1801.00 Lakhs**

The details of the cost have been provided in the estimates.

It has been assumed that the Bus Terminal would constructed in a period of 18 months

##### 8.1.2 Sources of Finance

The project has been assumed to be financed through the following means.

- JNNURM Central Grant
- JNNURM State Grant
- KSRTC Equity

##### Assumptions

- JNNURM Central Grant - 80% of the total project cost
- JNNURM State Grant - 10% of the total project cost
- KSRTC Equity - 10% of the total project cost

##### 8.1.3 Sources of Revenue

The various sources of revenue from the project have been discussed in the following sub-sections.

##### Two Wheeler Parking Fee

One of the sources of revenue for the project is the fee collected from two wheelers on entry and parking into the terminal.

This entry and parking fee is divided into the following four categories:

### **Assumptions**

Number of 2 wheelers entering per day	:	400
Number of 2 wheelers entering and staying between 0 to 4 hrs	:	40% of the total number @ Rs. 2/- each
Number of 2 wheelers entering and staying between 4 to 8 hrs	:	40% of the total number @ Rs. 4/- each
Number of 2 wheelers entering and staying between 8 hrs to 16 hrs	:	15% of the total number @ Rs. 6/- each
Number of 2 wheelers entering and staying over 16 hrs	:	5% of the total number @ Rs. 8/- each
Increase in 2 wheelers parking fee	:	10% in every block of two years

### **Car Entry and Parking Fee**

One of the main sources of revenue for the project is the fee collected from cars on entry and parking into the bus terminal.

This entry and parking fee is divided into the following four categories:

### **Assumptions**

Number of cars entering per day	:	150
Number of cars entering and staying between 0 to 4 hrs	:	40% of the total number @ Rs. 5/- each
Number of cars entering and staying between 4 to 8 hrs	:	40% of the total number @ Rs. 10/- each

- Number of cars entering and staying : 15% of the total number @ Rs. 15/- each between 8 hrs to 16 hrs
- Number of cars entering and staying : 5% of the total number @ Rs. 20/- each over 16 hrs
- Increase in Car Entry Fee : 10% in every block of two years

The total projected revenues from this section are given in the following table:

Year	Year 1	Year 2	Year 3	Year 4	Year 5
Revenues (in Rs. lakhs)	9.46	9.46	10.41	10.41	11.45

### **Commercial Development**

The total site area of the proposed bus terminal is 3250.00 sqm.  
(site area to be filled)

Given the location of the proposed bus terminal and the real estate scenario in Moffusil Bus Stand, large scale commercial leveraging of the site is possible.

Keeping this potential revenue in view, the plan for the bus terminal provides for approximately 20228 sqm of area (in 2 floors including the Ground Floor), which may be utilised for commercial development.

The financial analysis has been carried out taking into account the commercial development and revenues that will accrue from commercial leveraging of the land.

### **Assumptions**

Area within the bus terminal earmarked for commercial development : 4639 sqm

Lease rate for ground floor area shops for base year : Rs. 161 /- per sqm per month – 4500 sqm

Lease rate for the first floor area shops for base year : Rs. 129/- per sqm per month – 7800 sqm

Lease rate for the second floor area shops for base year : Rs. 108/- per sqm per month – 7800sqm

Increase in rental rates : 10% in every block of three years

The total projected revenues from this section are given in the following table:

Year	Year 1	Year 2	Year 3	Year 4	Year 5
Revenues (in Rs. lakhs)					
Ground Floor	25.75	37.76	47.20	47.20	51.92
First Floor	55.51	85.49	109.91	122.13	134.34
Second Floor	46.26	71.24	91.59	101.77	111.949
<b>Total</b>	<b>127.52</b>	<b>194.49</b>	<b>248.70</b>	<b>271.1</b>	<b>298.21</b>

### **Advertising and Other revenues**

Advertising revenue has been assumed to be Rs. 10,000 per month.

### **8.1.4 Operation and Maintenance Expenses**

The summary of the operation and maintenance costs estimated has been reproduced below:

Operation & Maintenance Expenses	Amount	Annual Increase
Annual Maintenance		
For Bus Terminal Area	Rs 12.5/sq.m/month	5%
For Commercial Area	Rs 10/sq.m/month	5%
For Paved Area	0.5% of construction cost	5%
Electricity & Water Supply	5% of construction cost of electricity and water services	5%
Periodic Maintenance (once in 5 years)		
For Bus Terminal Pavement Area	5% of construction cost	
For Depot Area	5% of construction cost	

### 8.1.5 Project Viability

For the above assumptions, the IRRs & NPV upto a 30 year time period are set out below:

Year	Entity	Value / Amount	Period
5 YEARS	IRR	NEGATIVE VALUE	2007-2011
10 YEARS	IRR	-8%	2007-2016
15 YEARS	IRR	2%	2007-2021
20 YEARS	IRR	6%	2007-2027
25 YEARS	IRR	8%	2007-2032
30 YEARS	IRR	9%	2007-2037
		Value in INR	
5 YEARS	NPV	-164212000.7	2007-2011
10 YEARS	NPV	-128527376.3	2007-2016
15 YEARS	NPV	-108096224.8	2007-2021
20 YEARS	NPV	-94434603.72	2007-2027
25 YEARS	NPV	-88155323.93	2007-2032
30 YEARS	NPV	-84526464.51	2007-2037

Infrastructure Projects taken up under the private sector participation framework, it is seen that private investors are

normally interested in a minimum equity IRR of 20% or more. Assuming that the cost of debt is 15% and that the project is financed equally by debt and equity, in order to achieve this hurdle return on equity the target project IRR would be more.

Therefore, the project is not a commercially attractive proposition for implementation through private participation on BOT basis.

## **8.2 ULB level perspectives and financial situation assessment**

8.2.1 The cash flow statement is given as per annexure

8.2.2 Debt situation assessment Enclosed as an Annexure No.

8.2.3.1.1 other financial information - Nil

## CHAPTER – 9

### **Project Benefit Assessment (Social Cost-Benefit Assessment)**

#### **9.1 A list of benefit from social perspective (both social and economic)**

- Unlike the earlier days of standard of living, now the man has achieved progress both financially and socially. To fulfill the transport needs and other associated facilities he look to the operating agencies. It is the duty and responsibility of the KSRTC to know the pulse of the common man in providing such advanced facilities in the transport sector. This is a people friendly project which is going to trigger off additional activities. Such additional activities will generate more per capita income there by improve further standard of living.
- It has been discussed through political leaders with groups representing different sections, social groups and other sections of society for proposing this project by the KSRTC. Generally all have agreed for the implementation of these projects which enjoys political and social acceptability.
- Better access to public transport both in frequency and in service will draw more sections of people to use public transport and avoid self and other means of transport.
- There will be marked improvement in the service quality as the public amenities such as Parking facility to 2 wheelers and cars, Auto/Taxi stand, Tourist guidance centre (KSTDC), rail/air reservation counters, restaurant and refreshment stall, shopping centre, library, fruit and vegetable stall, TV waiting lounge, security cabin, yatri nivas (rest house), Post Office/Bank/ATM, dormitories,

creches, crew rooms, staff rooms, bath and toilets, wash rooms, Police Chowky, cloak room etc will be provided. These facilities at one location is difficult to find now anywhere in this area.

- Just as any other city, the urban poor of Mysore city has better access to the facilities now to be provided which facilitates to reach their working places more comfortably and induces them to have better earning. Also their time and money is saved due to availability of all services at a place.
- Also the facilities now to be provided at one place has positive effect on their safety, cost saving, improved efficiency etc.
- At present there are no good shopping, communications, catering, drinking water, waiting platforms, toilet facilities, parking facilities etc. in and around the vicinity for the commuters. This project envisages more importance in providing better amenities and environmental improvement.
- By providing better amenities there will be scope for employment generation and development of the area as a whole.
- Providing better amenities and easy access to all sections of community will improve the quality of their life. Better quality products at affordable prices, better services, recreation facilities, communication access, better transport etc. enriches the quality of life.

## **9.2 A list of “negative externalities” (i.e., adverse impacts) from a societal perspective (both social**

**and economic) supported by:**

- With the Upgradation of the MBS value of the surrounding properties will be increased in addition to increase in commercial activity.
- This may cause more social problems such as migration, lack of amenities in proportion to the development and increase in population.
- Sanitary conditions may also worsen if sufficient measures are not taken to improve the existing conditions in the surrounding areas.
- Traffic congestion due to increased traffic may occur in surrounding areas for which suitable measures are to be taken early by strengthening and widening the roads.
- Cost of living may go up due to increase in the value of landed property in terms of prevailing monthly rent / leasing of houses.
- Air, noise and visual pollution due to increased traffic, sanitation problems due to usage by more commuters causes environmental impacts and has to be minimized as per envisaged environmental management plan.
- The present green cover will not be disturbed and it is proposed to have more green cover under environmental management plan.
- Displacement of inhabitants is not there as this project being a vacant site which will not affect any inhabitants.
- Similarly disruption in livelihood / reduced employment / labour redundancy is not there. This

project induces more employment and supports to earn better livelihood.

- There is no scope for haphazard development around / adjacent to the project site area since all developments are strictly controlled by other agencies like Municipal corporation and Mysore Urban Development Authority.