



## **CHAPTER 3.0**

# **VIJAYAWADA TRANSPORT PLAN STUDY**

### **3.1 Introduction**

Vijayawada, the third large city in Andhra Pradesh in terms of population, is fast growing and changing. Its population has doubled in the last two decades and continues to grow at a high rate. The economic base is changing from a predominantly trading centre into a busy multi-functional city. Considering the need for enabling and sustaining growth and change through an efficient transport infrastructure system, the Vijayawada Municipal Corporation has initiated action for conduct of Comprehensive Traffic and Transportation Study (CTTS) for Vijayawada and preparation of Integrated Transport System Development Plan. The study is being carried out by M/s Consulting Engineering Services (India) Private Limited, New Delhi.

The Comprehensive Traffic and Transportation Study (CTTS) was initiated by end June 2006. Extensive surveys and studies have been carried out. An Interim Report, describing the physical, road network, traffic, socio-economic and travel characteristics of the city has been submitted. The Final Report is expected to be submitted by March 2007.

### **3.2 Study Area**

The study area comprises the area under Vijayawada Municipal Corporation. It extends over 61.88 sq. km. Administratively it is identified into 3 circles and 59 wards. For CTTS, wards have been identified as Traffic Analysis Zones (TAZ). In addition external areas are identified into 15 TAZs. The 59 internal zones are regrouped into 11 sectors for presentation of characteristics. **Figure 3.1** presents the study area and TAZs.

### **3.3 Earlier Studies**

Vijayawada city has the advantage of a number of studies guiding its development. Important amongst them are:

- Outline Development Plan prepared by T&CP Department, GOAP (1967)
- Zonal Development Plan for Vijayawada Zone (Draft) prepared on behalf of VGTM UDA (2005)
- City Development Plan prepared by APUFIDC, GoAP

#### *Outline Development Plan*

The Outline Development Plan (ODP) (Master Plan) was prepared in 1967 to detail, direct and regulate the development of the city during the period 1967-1981. The ODP projected the population of Vijayawada to be 4.78 lakhs by 1981.



### *Vijayawada Zonal Development Plan*

The Vijayawada Guntur Tenali Mangalagiri (VGTM) Urban Development Authority (UDA) has taken up preparation of Zonal Development Plans for the VGTM urban region. Vijayawada is one of the 23 zones in the region. The ZDP (Final Draft) for Vijayawada zone comprising the area under Vijayawada Municipal Corporation, extending over 61.88 sq. km has since been prepared under the aegis of VGTMUDA. The ZDP has been prepared after extensive surveys and intensive public participation.

The Vijayawada Zonal Development Plan (Master Plan) has projected the population of Vijayawada city to be 16.40 lakhs by 2021 and to accommodate this population and related activities has proposed Land Use pattern. The existing land use (2004) and the proposed land use pattern (2021) are presented in **Table 3.1**.

**Table 3.1: Vijayawada - Existing and Proposed Land Use**

SI No.	Land Use	Existing (2004)			Proposed (2021)	
		Area (ha)	%		Area (ha)	%
	<b>Developed Area</b>					
1	Residential	1348.25	21.79		3022.95	48.55
2	Mixed-residential	141.36	2.28		74.89	1.21
3	Residential (Vacant)	254.46	4.11		-	-
4	Commercial	247.91	4.01		279.30	4.51
5	Industrial	72.38	1.17		123.11	1.99
6	Public & Semi-public	270.16	4.37		363.56	5.88
7	Educational	178.31	2.88		-	-
8	Parks & Playgrounds	34.90	0.56		205.82	3.33
9	Recreational others	3.09	0.05			
10	Roads	800.81	12.94		676.85	10.94
11	Railway	190.49	3.08	Transport & communication	273.25	4.42
12	Water Body (Canals & others)	211.28	3.41	Water Bodies	788.78	12.75
	Sub Total	3753.38	60.65	Conservation	366.50	5.92
					13.08	0.21
	<b>Undeveloped Area</b>					
13	Agricultural Area	885.97	14.32			
14	Vacant Lands	618.28	9.99			
15	Water Body (River)	668.41	10.80			
16	Hills	262.06	4.23			
	Sub Total	2434.72	39.35			
	Total	6188.10	100.00		6188.10	100.00

### *Vijayawada City Development Plan*

The Andhra Pradesh Urban Finance and Infrastructure Development Corporation, GoAP have prepared a City Development Plan (CDP) for Vijayawada and have submitted to



Ministry of Urban Development, GoI, seeking financial support under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). The CDP objectives are:

- To develop a city development framework for Vijayawada Urban Agglomeration
- To formulate the Strategic Action Plan (SAP) and the City Assistance Programme (CAP) based on the city development framework.

The CDP has projected the population size of VMC to be 11.77 lakh by 2011 and 16.41 lakh by 2021.

The CDP discusses the existing and emerging scenarios of demography, economy and landuse of Vijayawada; analyses the legal and institutional framework including identification of needed reforms; analyses the position of Municipal Infrastructure Systems comprising Water Supply, Sewerage, Solid Waste Management, Traffic and Transportation, and Basic Services to the Poor; formulates vision and identifies strategy framework under each sector and proposes a City Investment Plan and Financing Strategies under each sector of municipal infrastructure over a period of 7 years. The proposed City investment Plan is of the order of Rs. 4400 crores as under:

	(Rs. Crores)
Water Supply	540.00
Sewerage	583.00
Storm Water Drainage	1299.00
Sanitation	50.00
Solid Waste Management	121.65
Traffic and Transportation	740.35
Poverty Sector	1066.00
<b>Total</b>	<b>4400.00</b>

The CDP lays emphasis on improvement of the traffic and transport system of Vijayawada. The sector vision has been stated as under:

"To have efficient transport system in place by improving the public transport that is sustainable, safe, reliable, environment friendly, cost effective and accessible to all including the poor".

The proposed strategies under this sector include:

- Constitution and operationalisation of Unified Vijayawada Traffic and Transport Authority (UVTTA)
- Conduct of Comprehensive Traffic and Transport Study for the entire Vijayawada Urban Agglomeration
- Ring fencing of APSRTC/Railways
- Development of dedicated bus lines with bus bays, increased fleet, frequency and improved image



- Improvement of existing roads
- Traffic signalling, signage and junction improvements
- Grade Separators
- Parallel roads, Link roads
- Road widening
- Parking of vehicles
- Pedestrian crossings, FOBs/subways
- Pedestrian Guard-rails
- Footpaths
- Environmental upgradation w.r.t. traffic issues

The CDP, under Transport Sector, has indicated a total investment of Rs. 2900 crores, as under:

	(Rs. Crores)
• Increasing Bus Fleets	60.0
• Introducing Light Rail Transport	2440.00
• Construction of bridge across river Krishna near Prakasam barrage	200.0
• Providing tunnel for Gunalala hill	200.0
<b>Total</b>	<b>2900.00</b>

### 3.4. Demography

Vijayawada has been experiencing steady growth and increase in its population size. Between 1981 and 2001, the population size has nearly doubled. In 2001 the city contained a population size 8.45 lakhs. The Interim Report has estimated the present population (2006) to be 9.2 lakhs. **Table 3.2** presents the demographic growth of Vijayawada City.

**Table 3.2: Population Growth Rate: Vijayawada, 1901-2001**

Sl No.	Year	Population	Decadal Growth Rate (%)
1	1991	24224	-
2	1911	32867	35.68
3	1921	44159	34.36
4	1931	60427	36.84
5	1941	86184	42.62
6	1951	161198	87.04
7	1961	230397	42.93
8	1971	317258	37.70
9	1981	461772	45.55
10	1991	701827	51.99
<b>11</b>	<b>2001</b>	<b>845217</b>	<b>20.43</b>

Source: VZDP



### 3.5 Economy

The Workforce Participation Rate (WFPR) in Vijayawada, in 2001, was 31.19%. Tertiary sector was predominant (71%). Secondary sector accounted for 21.61%. Of this manufacturing had a share of 16.7%. Interestingly the share of primary sector had increased over that in 1971. This was mainly due to extension of city limits, resulting in a large area within the city limits still under agriculture use.

Vijayawada has traditionally been an important trading centre in the region. It serve as a regional market centre for the rich agricultural region. A number of agro industries were also located in the city. However, with the establishment of the thermal power station, industrial development and diversification has taken place at a fast pace. A variety of industries, of all scales (small, medium and large) have been located in and around Vijayawada. Auto Nagar Industrial Area comprising automobile service industries is well known.

Vijayawada is also known for its educational institutions. It is also a famous religious tourist centre with Kanaka Durga Temple drawing large numbers of domestic tourists.

Planned development of the city with high quality of life and efficient transport system would enable the city to attract modern IT based industries and contribute towards diversification and modernization of its economic base.

**Table 3.3** presents the occupational structure of Vijayawada.

**Table 3.3: Occupational Structure: Vijayawada, 1971 & 1991**

Sl. No.	Occupation	Main Workers		% of total workers	
		1971	1991	1971	1991
	<b>I Primary Sector</b>				
1	Cultivators	871	2239	0.94	1.05
2	Agri. Labourers	1191	8907	1.28	4.20
3	Live Stock	458	1344	0.49	0.63
4	Mining & Quarrying	365	1493	0.39	0.70
	<b>Total Primary</b>	<b>2885</b>	<b>13983</b>	<b>3.10</b>	<b>6.58</b>
	<b>II Secondary Sector</b>				
5		19676	35697	21.12	16.70
6		6006	10470	6.45	4.91
	<b>Total Secondary</b>	<b>25682</b>	<b>46167</b>	<b>27.57</b>	<b>21.61</b>
	<b>III Tertiary Sector</b>				
7	Trade & Commerce	25081	57511	26.93	27.30
8	Transport & Communications	21257	42325	22.82	19.90
9	Others	18240	52252	19.58	24.60

Source: VZDP