

## **4. FUNDAMENTALS OF TRANSPORTATION MASTER PLAN FOR JABODETABEK**

### **4.1 Goals of Urban Transportation System**

The analysis of the present urban transportation problems in the Jabodetabek region has resulted in the identification of four major goals.

#### **4.1.1 Efficiency in Transportation System to Support Economic Activities**

All alleviation of traffic congestion should be achieved through the following:

- 1) by increasing road capacity through the development and improvement of the road network;
- 2) by optimizing utilization of the existing road capacity by way of a traffic control system and provision of traffic information; and
- 3) by decreasing vehicular traffic demand through transportation management and diverting private mode users to public modes of transportation.

At the same time, promotion of public transport use should be emphasized since mass transit systems have an advantage over private modes of transport in terms of travel costs and space.

#### **4.1.2 Equity in Transportation for All the Members in the Society**

All members of the society should be provided with a minimum level of transportation service in order to secure a civil minimum. The role of public transport is of great importance in providing affordable means of transport for the lower income people to access various social services. At the same time, it is necessary to develop transportation facilities for the physically challenged (universal design).

#### **4.1.3 Environmental Betterment related to Transportation**

Air pollution caused by motorized vehicles should be minimized through emission control of automobiles, promotion of public transport and traffic demand control, especially in the congested areas. Countermeasures to reduce PM10 should be the main focus.

Noise at roadsides and residential areas where surveyed shows unacceptably high levels except at midnight. Noise pollution caused by automobiles also should be targeted through frequent and appropriate vehicle maintenance and driving manners improvement.

#### **4.1.4 Transportation Safety and Security**

Since lives are invaluable and death and injury due to traffic accidents will bring great grief to family members and friends, traffic safety should be enhanced and the number of accident victims should be minimized through the enforcement of laws and regulations, intensive public campaigns, training and education for drivers as well as the general public. Improvement of traffic facilities through engineering design would contribute to the reduction of traffic accidents.

The SITRAMP Home Visit Survey results show that at present residents are most concerned with the security for utilizing public transportation. A sense of insecurity at railway stations and at bus shelters as well as on-board public transportation vehicles should be improved first.

## **4.2 Urban Transportation Policy**

To achieve the four goals for urban transportation system development, the following transportation policies are essential for the Jabodetabek region:

- Urban Transportation Policy 1: Promotion of Public Transportation Use
- Urban Transportation Policy 2: Alleviation of Traffic Congestion
- Urban Transportation Policy 3: Reduction of Air Pollutants and Traffic Noise
- Urban Transportation Policy 4: Reduction of Transportation Accidents and Improvement of Security

These four transportation policies are inter-related. Promotion of public transportation is a principal measure to reduce dependence on private modes of transportation. Mere improvement of public transportation services, however, would not entice people who are accustomed to using private modes of transportation to shift to public modes. Traffic restraint policy measures would enhance increase of public transportation use on the condition that sufficient level of public transportation services is provided. On the other hand, increase in security on public transportation would bring about increase of public transportation use as well since currently people are concerned with the issue of security on public vehicles and it contributes to shift to private modes of transportation. Reduction of automobile use would also lead to reduction of air pollution and traffic noise caused by cars and motorcycles. Improvement of quality of public transportation services by reform of bus operation regime would result in augmentation of transportation safety because then there would be safer operation of bus fleets by bus drivers.

## **4.3 Regional Trunk Transportation System Development Strategy**

A robust trunk transportation system should be established in the context of regional development. The regional development plan demands support by transportation system for formulating a desirable regional structure and for directing the development in the region.

### **4.3.1 Support Inter-regional Cargo and Passenger Transport Demand**

The primary transportation network, which serves inter-regional commodity movements, should be enhanced to meet increasing demand and to improve access to important facilities such as the primary centers, seaport, namely, Tanjung Priok Port, the Soekarno-Hatta airport, and industrial estates. For inter-regional passenger travels, access to the international airport, intercity bus terminals and the central railway station should also be enhanced. In this regard, improvement of access to the Tanjung Priok port in accordance with its expansion plan is an urgent task for regional economic development, whereas a robust access to the Soekarno-Hatta international airport should also be provided by improvement of the current Cenkareng Access Toll Road, construction of W-1 and W-2 sections of the JORR, and the proposed eastern section of the 2nd JORR.

### **4.3.2 Guiding East-West Urban Development**

To support the urban development policy of Jabodetabek's east-west direction, transportation system development should be utilized as a tool for guiding urban development in the desired direction. Special attention should be paid to the east-west direction to induce urban development in the designated area.

### **4.3.3 Strengthening Accessibility between Urban Centers in Jabodetabek**

The development of urban centers in Bodetabek should be regarded as a long-term measure for decreasing the commuter flows from Bodetabek to Jakarta. Accessibility between the urban centers in Bodetabek should be enhanced to achieve sustainable development of urban centers in Bodetabek by augmenting mutual interaction between centers. Accessibility to/from Jakarta should also be strengthened to support the social and economic activities in the urban centers in Bodetabek.

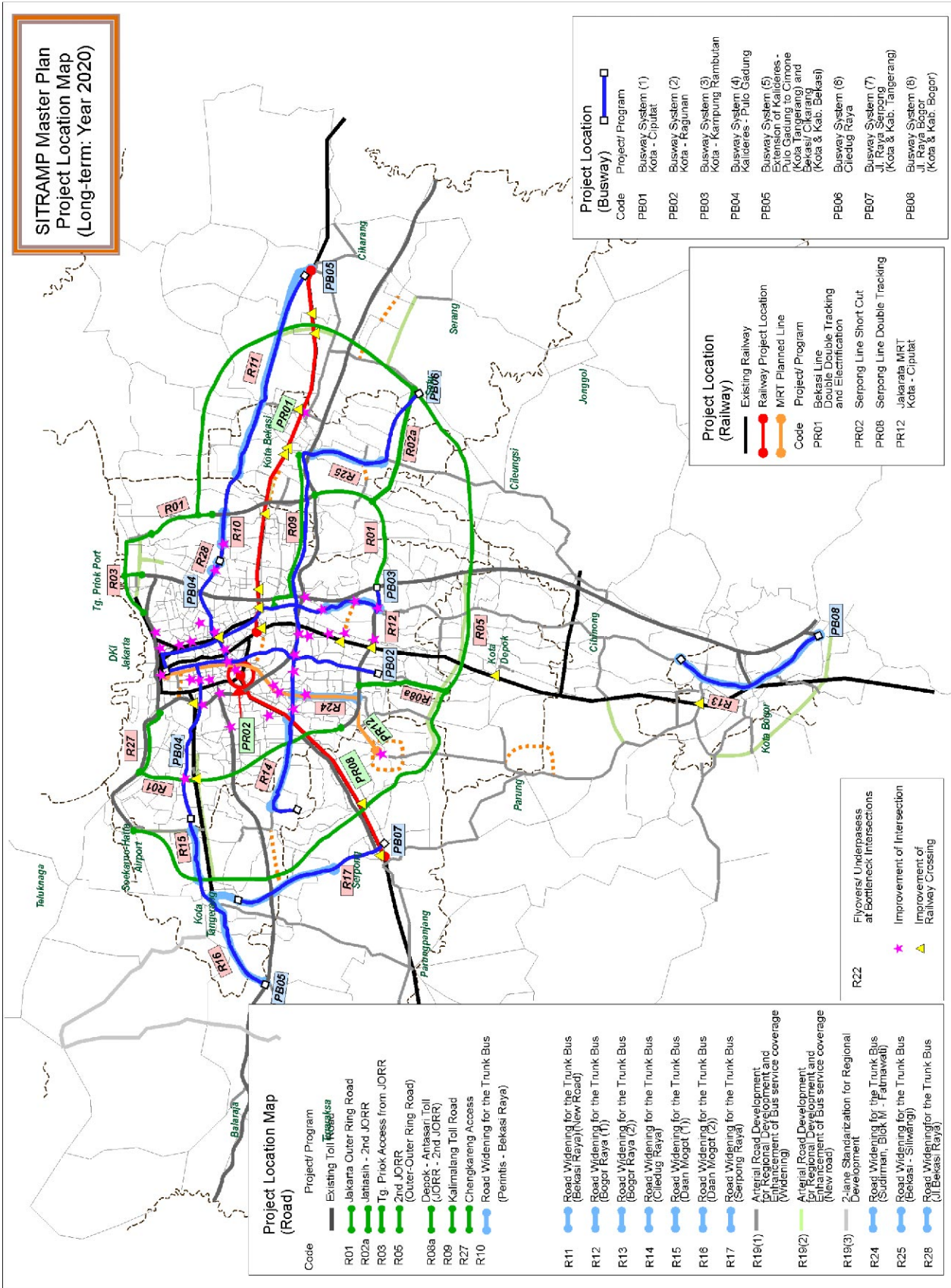


Figure 4.1 SITRAMP Master Plan Year 2020

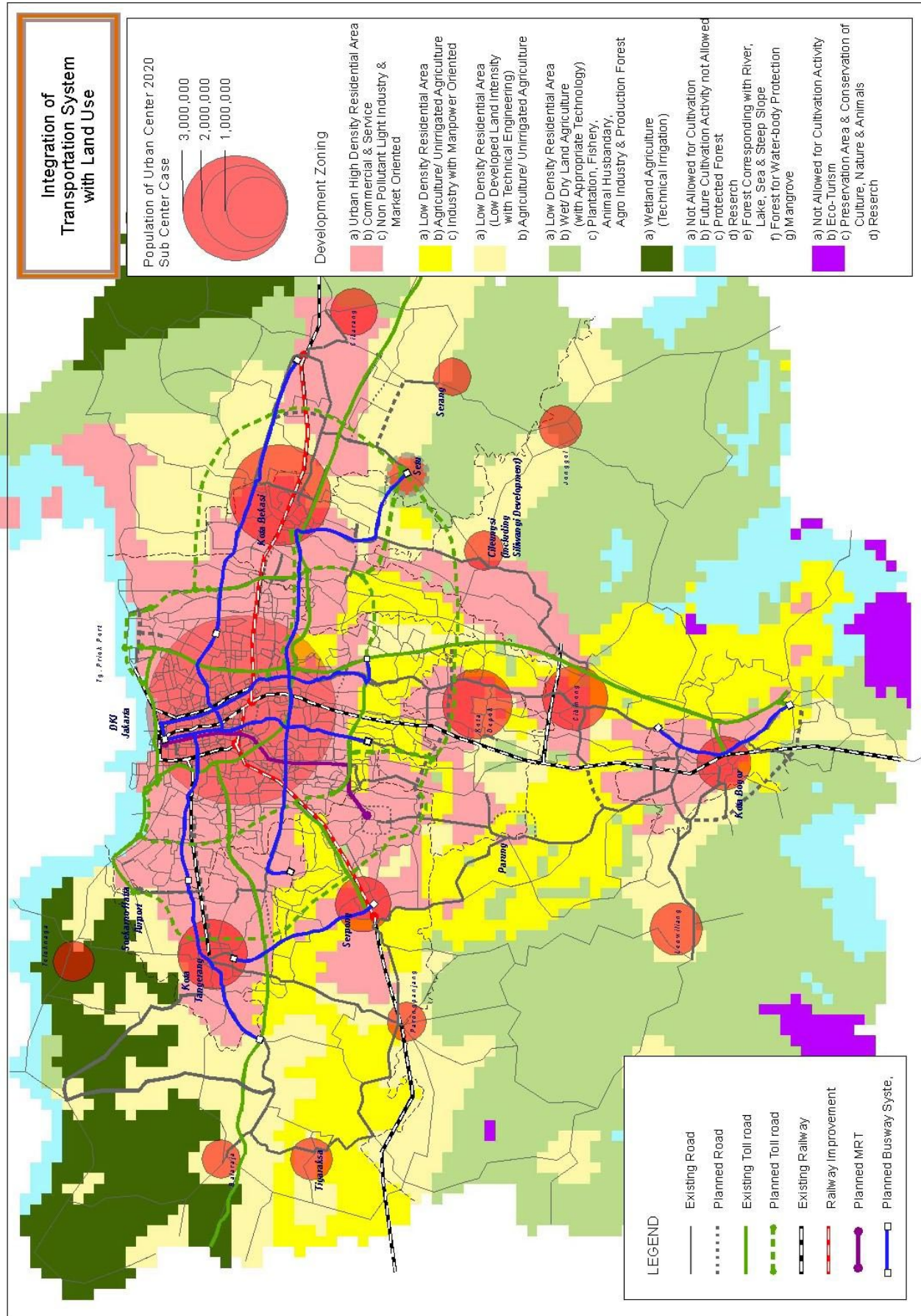


Figure 4.2 Integration of Transportation System with Land Use

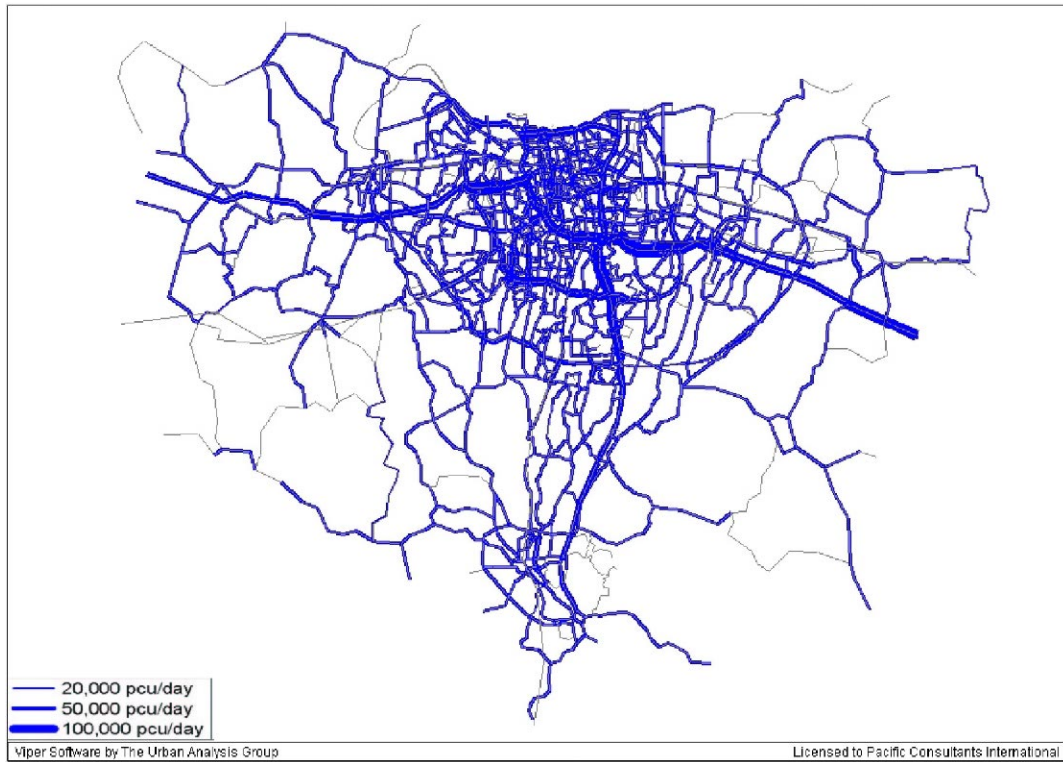


Figure 4.3 Projected Daily Traffic Volume (pcu) in 2020

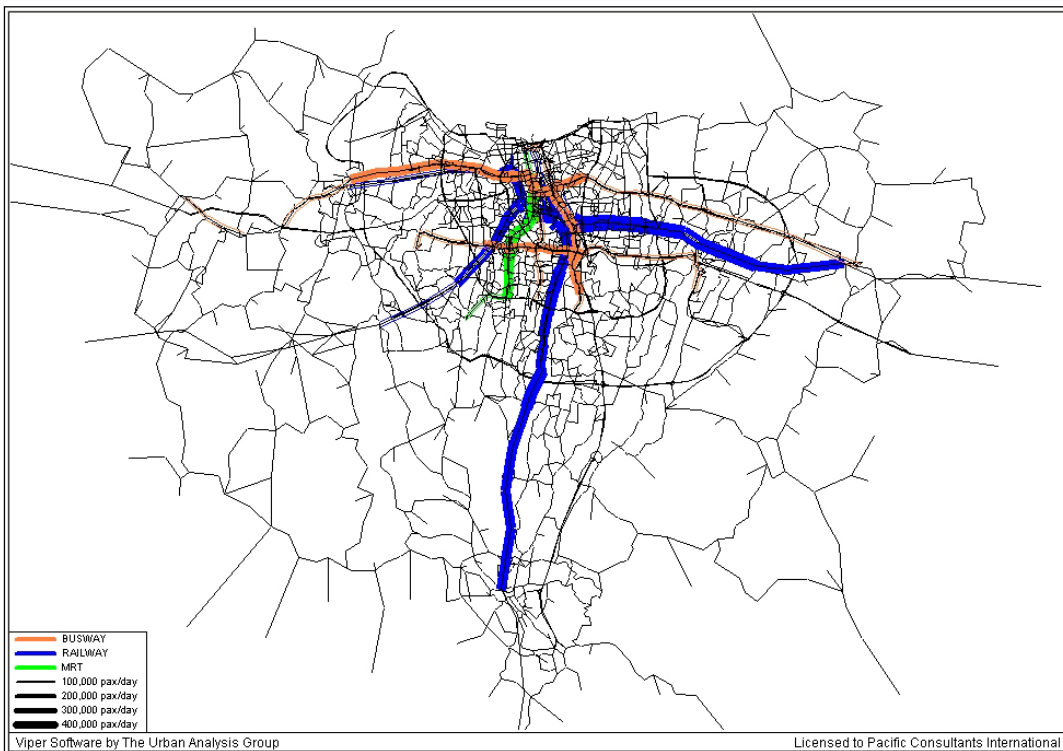


Figure 4.4 Estimated Daily Passenger Volume in 2020

#### 4.4 Target Performance of the Master Plan

Specific targets are essential for guiding implementation of the programs proposed in the transportation master plan and for monitoring the progress of the program implementation.

Meeting the targets requires the implementation of policy measures proposed in the master plan such as improving public transportation system and employing transportation demand management.

##### Urban Transportation Policy 1: Promotion of Public Transportation Use

Performance Measures	Condition in 2002	Target in 2010	Target in 2020
Travel Time - Average travel time of public transportation passengers	58 min.	55 min.	50 min.
Accessibility - Number of jobs within 660-meter distance from railway stations	0.6 million job	1.0 million jobs	1.2 million jobs
- Number of jobs within 660-meter distance from busway shelters	-	1.2 million jobs	1.2 million jobs
Convenience - Average number of transfers	0.98 time	1 time	1 time
Cost - (Average Public Transportation Fare per Trip) / (Average Income per Capita) Year 2002 = 100	100	139	83

##### Urban Transportation Policy 2: Alleviating Traffic Congestion

Performance Measures	Condition in 2002	Target in 2010	Target in 2020
Jabodetabek region - Average speed (km/hour)	34.5	33	30
Road length at speed of 20 km per hour and more (km)	1584	1650	1700
- Urbanized area	201	200	200
- CBD			

##### Urban Transportation Policy 3: Reduction of Air Pollution and Traffic Noise

Performance Measures	Condition in 2002	Target in 2010	Target in 2020
PM10 Emission per capita (g/day)	0.27	0.25	0.22
CO2 Emission per capita (kg/day)	0.66	0.73	1.00
Energy Consumption per capita (mil. J/day)	9	10	14
Road length with PM10 is not allowable range of environmental standard (km)	1,850	350	700
Road length with traffic noise is not allowable range of environmental standard (km)	3,500	4,000	4,500

##### Urban Transportation Policy 4: Safety and Security Improvement

Performance Measures	Condition in 2002	Target in 2010	Target in 2020
Number of injuries in traffic accidents	913 (in 2000)	650	450
Number of fatalities in traffic accidents	585 (in 2000)	440 (25% reduction)	290 (50% reduction)
Number of train accidents	60	45	30