

## - Road Development -

**90% of the area takes less than 30 minutes to/ from the urban center, thanks to the trunk road network development.**



Ring Road No.2

Source: Road and Highway Bureau, City of Yokohama

Ring Expressway North Line at Underground Section (under construction)



Source: Road and Highway Bureau, City of Yokohama

### Background and Objective

The road network of Yokohama City is functionally categorized as expressways and national roads for high speed and long distance, trunk roads for inner city transport, district roads for access to stations and district centers, and access roads in residential areas. This hierarchical road network allows the distribution of people and goods for socio-economic activities.

The ratio of trunk road development is not high compared to other cities in Japan, so roads have been developed mainly focusing on prioritized trunk roads. In addition, maintenance

of road facilities is one of the critical issues, since more than 1,200 bridges are over 50 years old and need to be reconstructed or repaired soon.

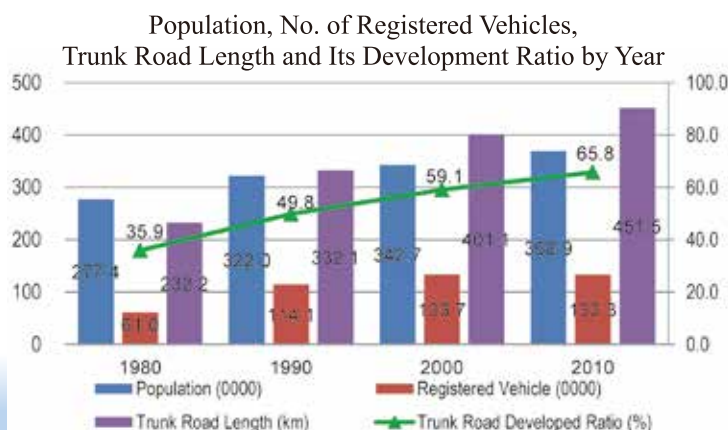
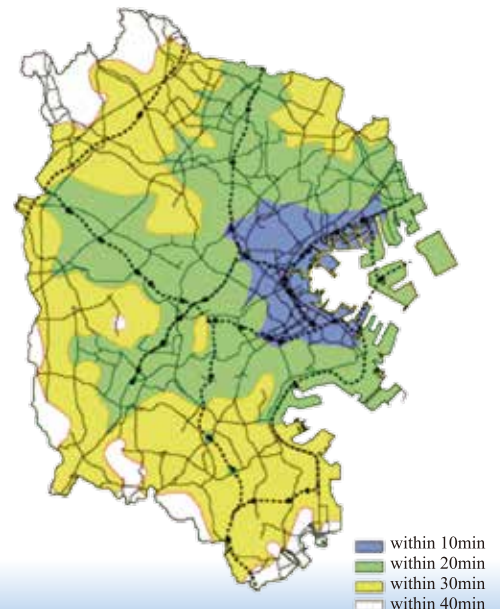
### Project Impacts

1) Traffic Improvement between Urban Center and Suburban Area  
The slogan of “less than 30 minutes accessible to urban center” was set to allow citizens access between each district and the city center within 30 minutes, by formulating ring and radial networks of expressways and trunk roads. This objective was achieved in about 90% of the city in 2003, thanks to the development of expressways and interchanges, and trunk ring roads.

### 2) Steady Development of Trunk Roads

A trunk road is designated as an “urban facility” under the Urban Planning Law to secure public land for road development. In 2013, 66.4% of the total length (678km) of planned trunk roads authorized by law has been developed. To facilitate traffic demand, steady road development is indispensable.

Coverage Area of “Less than 30 Minutes Accessible to Urban Center”



Source: JICA Study Team based on data from Road and Highway Bureau, City of Yokohama

Source: Road and Highway Bureau, City of Yokohama

# Road Development

## Expressway Development

The Yokohama Ring Expressway, located 10-15km away from the urban center of Yokohama City, aims to improve convenience, integrate districts, ease traffic congestion, and reestablish functions of access roads by connecting radial expressways and trunk roads.

The Ring North Expressway is under construction by the Metropolitan Expressway Company in charge of expressway, and by Yokohama City in charge of roads near interchanges. This Ring Expressway will pass through built-up area, so 70% of its total length of 8.2km will be underground to reduce land acquisition and negative environment impact.



Source: Road and Highway Bureau, City of Yokohama

## Measures to Ease Traffic Congestion on District Roads

To ease traffic congestion, local-based improvement projects such as intersection improvement and bus bay construction are implemented. These measures contribute to facilitating traffic flow of buses and cars, and to promoting the utilization of public transport.



Before Project  
(left turn and straight lanes are mixed)



After Project  
(congestion of straight lane was mitigated by providing a left turn lane)

Source: Road and Highway Bureau, City of Yokohama

## Prioritized Trunk Road Development

The project costs of trunk roads are huge, particularly for land acquisition and construction. To maximize project impacts with limited budgets, Yokohama City has developed the “3 Ring and 10 Radial Trunk Road Network” intensively. This network can connect the city center and sub-urban areas. To date, 73.1% of the total length (approx. 200km) has been constructed.



Source: Road and Highway Bureau, City of Yokohama

## Rehabilitation of Bridges for Longer Operating Life

Some 70% of the total of road bridges (1,744) were constructed intensively from the 1960's to 90's. The number of deteriorated bridges older than 50 years will increase in the next decades, so prolonging the life of bridges is of critical importance.

Yokohama City formulated the “Maintenance Plan of Bridges for Prolonging Life,” and has repaired bridges based on the “planned maintenance” concept which regularly check and repair them by applying the PDCA (Plan – Do – Check - Act) cycle.



Checking of Beam

Repair of Painting



Source: Road and Highway Bureau, City of Yokohama