



Pune Municipal Corporation

Pune

Best Practices award given by IUT, MoUD New Delhi

| S. N. | Outline | |
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| 1 | Project Category | Best Multimode Integrated Project |
| 2 | Name of the project | Station Area Traffic Improvement: (Grade Separated facility at Pune Railway Station connecting City & Inter State Bus Terminal with Multilevel Parking Plaza) |
| 3 | State | Maharashtra |
| 4 | City | Pune |
| 5 | Implementing agency | Pune Municipal Corporation |
| 6 | Estimated Cost of the Project (Rs crores) | Rs. 30.61 Cr. (1.Parking Plaza: - Rs 27.81 Cr. 2. Subway : - Rs 2.80 Cr.) |
| 7 | Background | |
| | <ul style="list-style-type: none"> Brief introduction of socio-economic, demographic, and geographic context of the city (100 words) | |
| | <p><u>1.GEOGRAPHY</u></p> <p>Pune is located at 18°32' North 72° 51' East. It is situated near the western margin of the Deccan Plateau. It lies on the leeward side of the Sahyadri ranges and Western Ghats, 560 m. above sea level, at the confluence of the Mula and Mutha Rivers. Two more rivers, Pavana and Indrayani, traverse the northwestern outskirts of the urban area. The Sinhagad-Katraj-Dive Ghats range forms the southern boundary of the urban area.</p> | |

2. SOCIO-ECONOMIC

Pune as the Oxford of the East: The other big sector that Pune has hosted is education. Famous as the Oxford of the East, the first landmark in Pune's evolution as an educational centre was the establishment of the Deccan Education Society in the city. Today the city has six universities, which include 600 functional colleges. It is estimated that the student population exceeds five lakhs. It is to be noted that 3 out of 11 universities identified by the Government of India as potential education exporters are based in Pune; in recent years, Pune has attracted about 8000 foreign students from over 62 countries.

The main drivers of the economy in Pune are:

- Auto and auto ancillary -- The Detroit of India;
- The prime higher education centre -- The Oxford of East;
- Established and huge potential to develop as the IT hub of India;
- Potential to emerge as a BT hub; and
- Growing agro and food processing industry.

The workforce participation rate as per the Census 2001 (main and marginal workers) in PMC is 34.08 percent, up by 2.20 percent as compared to 31.88 percent in 1991.

The growth of Pune is being driven by various industry segments. The sectors that are vibrant in Pune today are auto, auto components, forgings, mechanical components, food processing and service industries like IT and IT enabled services.

A large proportion of the city's population thrives on wholesale and retail trade and commerce. The city serves as the regional wholesale market for food grains and other commodities

The per capita GDP of the city is about Rs.46,000 which is almost 50% higher than India's per capita income.

Pune has thus emerged as the centre and hub for a wide range of diversified activities. The geography of its economic evolution shows both centripetal as well as centrifugal trends.

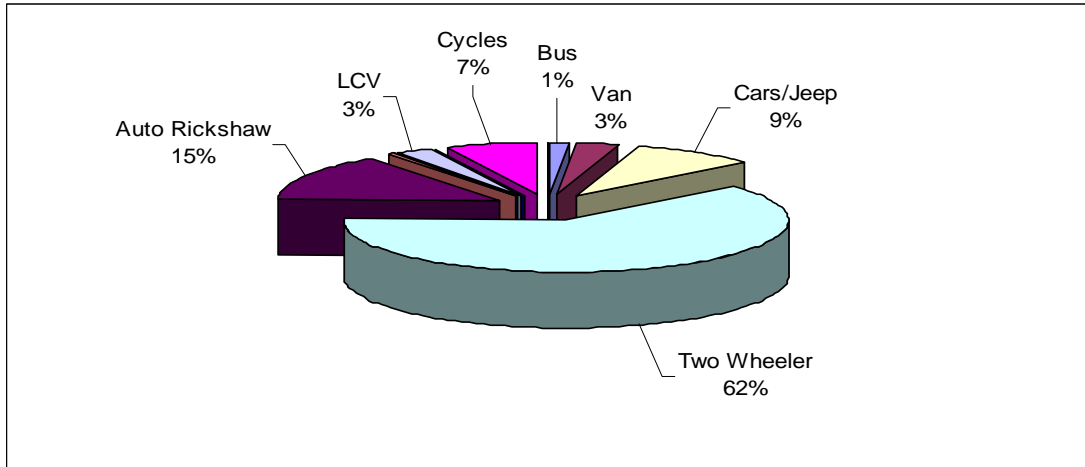
In addition, its inherent potential to develop various policies and programs of the GoI is likely to give a boost to Pune's economy.

The city would continue to be a major residential centre and a hub for business administration establishments, retail and wholesale trade centers, and educational and R&D

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| | <p>institutions.</p> <p>These possible developments will influence the city’s future needs. The road network that connects Pune with its emerging outskirts and industrial centers deserves equal attention as its already fragile and inadequate civic infrastructure.</p> <p>Given this scenario, the Pune civic authority and other concerned departments have to prepare themselves to improve its urban infrastructure, social infrastructure and other economic infrastructure (entailing services like adequate and uninterrupted power supply) to sustain and promote such vibrant economic activity.</p> <p><u>3.DEMOGRAPHY</u></p> <p>The population of Pune city as per Census 2001 is close to 25 lakhs with the decadal growth rate of about 50%. In the last 50 years, the city’s population has grown by more than five times.</p> <p>Pune has a working population of 55% of which almost 36% is comprised of youth. Amongst the dependent population (45%), around 37% consists of children and teenagers.</p> <p>The size of the municipal area is about 244 square kilometers as per Census 2001. Pune city has a population density of 10,403 per square km as per the 2001 census. The area in the centre of the city, which primarily is the old city, is densely populated. The city appears to be growing in the southeast and southwest directions.</p> <p>The positive feature of Pune is that large parcels of vacant lands are available and currently the densities are low, except in the core old city. Hence, there is no issue of land availability, but the affordability is an area of concern.</p> |
| | <ul style="list-style-type: none"> • Brief description of the current urban transport system and current modal split (500 words) |
| | <p><u>Vision</u></p> <p>Considering the challenges that Pune city is facing, the direction of the urban transport is likely to take without appropriate interventions, the inputs from stakeholders, public groups and past studies, the following broad vision is established for Pune city upon which the detailed mobility plan is structured:</p> <p>“Moving people safely and economically by emphasizing public transport and non-motorized transport.”</p> <p><i>Traffic and Transportation: Assessment and Status</i></p> |

The road infrastructure has not expanded in tandem with the increase in the number of vehicles in the city. In the last four decades, the population of the city has increased four times whereas the vehicle population has increased 87 times and the road length has increased by only five times. With the projections indicating that PMC would have a population of about 45 lakhs by 2021 and 57 lakhs by 2031, the road and transportation infrastructure has to not only meet the existing demand but also cater to the demand that will be generated by the increasing population.

Travel Modes and Vehicle



Source: Draft CMP of Pune City

There are more than 12.5 lakh registered vehicles in Pune as on date. The total number of registered vehicles has grown at a compound annual growth rate (CAGR) of 8 percent.

The total length of roads in the city is 1800 km. including about 50 km. of National Highways and State Highways.

Road Length in Pune

| S. No | Surface Type | Length in kms | Percentage |
|--------------------------|--------------------------------------------------|----------------|------------|
| A | Municipal Roads | | |
| 1 | Concrete | 32.00 | 2 |
| 2 | Black-topped | 1202.00 | 69 |
| 3 | WBM | 258.00 | 15 |
| 4 | Gravel and Earthen | 258.00 | 15 |
| Total Road Length | | 1750.00 | 100 |
| B | Other Agencies' Roads (NH/ SH/ PWD Roads) | 50.00 | -- |

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| B | Other Agencies' Roads (NH/ SH/ PWD Roads) | 50.00 | -- |
| Grand Total | | 1,800.00 * | -- |

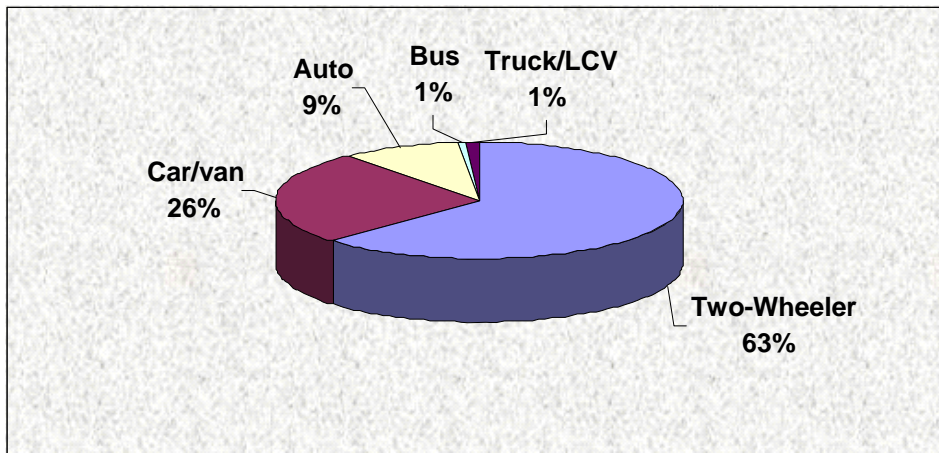
* This does not include the extent of Kutcha roads in the newly added villages.

Inter-City Bus Transport

There are three major inter-city bus terminals in the city located at Swargate, Shivajinagar and Pune Station. These terminals cater to the inter-city traffic with origin and destination other than Pune.

Parking

Organised on-street parking facilities are provided in selected locations in the city.



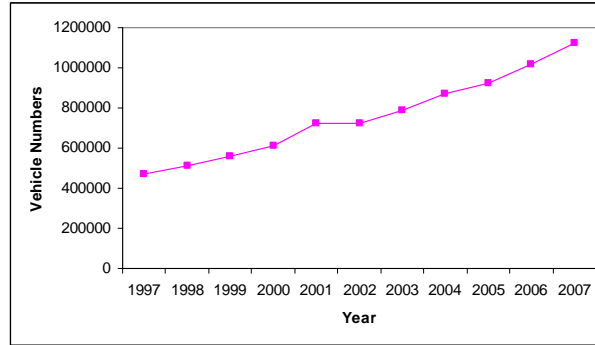
Average Composition of Parked Vehicles

Non Motorized Transport

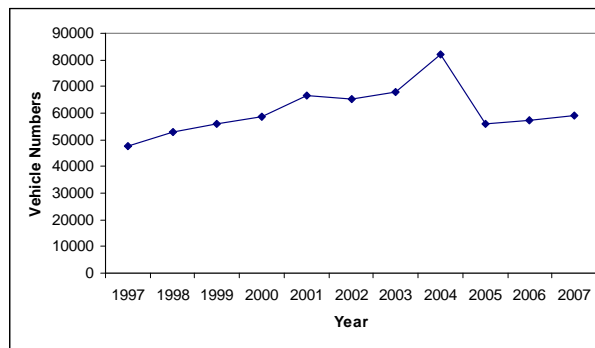
Historically, Pune was known as the "cycle city of India", however cycling has decreased in popularity as the ownership and use of motorized two-wheelers has increased. From House hold survey analysis it was observed about 11% of trips are made by cycles.

Private Vehicle Transport

The city (in 2007) has an estimated 14, 45,364 vehicles registered of which 11, 23,898 are two wheelers accounting for about 78% share. The growth trend of two wheeler and Car is shown below.



Growth trend of two wheeler



Growth trend of Car

Interstate Bus Transport and Private Bus transport

There are two major inter-city bus terminals in the city located at Swargate and Pune Station. These two terminals cater to inter-city traffic with origin and destination other than Pune. The Swargate terminal is located on the southern side of the city and the Pune station terminal is located next to the railway station in the heart of the city. At the Pune station terminal, this percentage is 90 indicating adequacy with respect to inter-city operations.

Private buses also operate their interstate operations. At present there is no terminal facility for private buses. The major location observed in the city is Swargate, Pune Station and Shivaji Nagar.

Local Trains

There are 17 pairs of trains between Pune and Lonavla, and three pairs of trains up to Talegaon in service currently. The services are run with four rakes, with nine compartments each. However, with a considerable increase in the number of commuters,

the demand for increasing the frequency of trains has also become stronger. The commuters have been demanding that the number of compartments should be increased from nine to 12 per train.

Performance Indices

| INDEX | Formulation | EXISTING |
|-----------------------|------------------------------------------------------------|----------|
| Network Speed | Average Running Speed for all vehicles | 18 |
| PT Mode Share | Public Transport Trips / Total Study Area Trips | 18% |
| NMT Mode Share | NMT Trips / Total Trips | 33% |
| Volume Capacity Ratio | Road Traffic Volume / Road Capacity | 1.4 |
| Accessibility | Work trips with Travel Time less than 15 min / Total Trips | 33% |
| Bus Supply | Bus Fleet / Lakh of Population | 28 |
| IPT | Registered IPT vehicles / Lakh of Population | 1890 |
| Walkability | Footpath Length / Road Length | 53% |
| Cyclability | Cycle Track Length / Road Length | 0% |
| Fatality | No. of Fatalities / Lakh of Population | 11 |
| Parking | Parkable Road Length / Road Length | 13% |

Strategies for Growth

The strategies adopted primarily have three dimensions: improving the service delivery by higher efficiency, improving service delivery by creating infrastructure assets, and improving the governance aspects of the Corporation. In order to tackle the issues of basic, economic and social infrastructure and to achieve the vision statement, PMC in consultation with the citizens has identified the broad strategies under the Traffic & Transportation as - Road widening, dedicated bus lanes, cycle tracks and improvement of the public transport system in the short run; exploring the possibility of BRTS and MRTS in the long run.

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| 8 | Current Status of the Project (please fill as per given below) | <p>The subway was completed and commissioned for public use on 30th September 2008. The subway has shops with advertising rights on the walls and public utility services.</p> <p><u>Commuters Movements at Junction :-</u></p> <ol style="list-style-type: none"> 1. Railway Station:- Daily Passengers Traffic is 2 Lacs per day approximately. 2. ST Bus Stand:- Carrying Bus Fleet of approx 300 buses per day with 2500 passengers. 3. PMT Buses :- Around 60,000 person per day 4. (IPT) Pune-Mumbai-Pune Taxi Services:- Around 500 Taxis per day carrying 2000 passengers. <p><u>Others Facilities:-</u></p> <ul style="list-style-type: none"> • Hawkers Displaced along the side in the planned manner. • Convenient shopping place for commuters. • Adequate Parking Space for 4-wheeler and 2-wheeler. • Safe Bus Transfer Station using Subway i.e. convenient pedestrian access form ST Stand to PMT and vise versa. <p>The RCC framework for the multistoried parking has been completed till 3rd floor. This parking building will be completed up to December 2008. The road has been completed with all required utilities including separators, signals & road marking. The road has been commissioned and the traffic is moving smoothly.</p> |
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| 9 | Objectives | |
| | <ul style="list-style-type: none"> • Key objectives or expected outcomes (100 words) | <ul style="list-style-type: none"> • The objective is to provide well planned traffic integration and dispersal system in and around station area including inter model interchange. • Parking management, traffic movement around the station and general improvement to the environment. • Decongestion of traffic by grade separation. • The Circulation area of the Railway station provides means for exchanging different modes of transport viz. Buses, Auto Rickshaws, Taxis and Railways. • The circulation area outside Pune Railway Station is inadequate to cater current load. • Commuters are facing problems in changeover of modes of transport. • Creating activities in subway to ensure pedestrian safety & generate revenue for O& M. • Understanding a specific issue locally • Planned Road Infrastructure – Junctions and Grade Separators. |
| | <ul style="list-style-type: none"> • Major components and activities (100 words) | <ul style="list-style-type: none"> • Subway • 39 nos Shops, Public Utilities and Provisions of advertisement rights with PMC in subway • Multilevel Parking Plaza (Basement+ 5) <ul style="list-style-type: none"> – Buses 29 – Cars 424 – Two Wheelers 1030 • Additional office space of 579 Sq.M for Post office, Police Station, PMC & PMT • Identified proper and adequate pickup points |

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| | | <p>for Autos, taxis and Buses</p> <ul style="list-style-type: none"> • Signage and Road Marking • Signaling |
| 10 | <p>Project Outline with key features (1000 words)</p> | <p style="text-align: center;"><u>Multimode Integrated Project</u></p> <p>(Grade Separated facility at Pune Railway Station connecting City & Inter State Bus Terminal, Auto and Taxi service with Multilevel Parking Plaza)</p> <p>The number of commuters plying by railway and S.T buses using the Chowk in front of Pune Railway Station and the roads leading to & fro station is high so also the number of citizens due to their movement in & out of the Sassoon General Hospital, Pune Central Building, Public Works Department, Collector’s Office, Zilla-Parishad Office.</p> <p>Hence the citizens and passengers used to find it very difficult to cross the roads at Pune Station Chowk and the bus terminus.</p> <p>As there is not sufficient space available for vehicular parking for those vehicles coming to the area, people park the vehicles in a haphazard way. Hence there are traffic jams and difficulties for pedestrians for walking along.</p> <p>Therefore, there is a scheme at the above location for a pedestrian subway at Pune Station Chowk and a multi-storeyed parking facility for vehicles.</p> <p>A. Pedestrian Subway :-</p> <p>By raising the middle portion of the road, the subway at the said location for easy movement of people is planned having an arrangement of ramps in all three directions with minimum number of steps and duly considering the physically challenged / older persons.</p> |

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| | | <p>As this location, subway will have 990 sqm of RCC construction with about Rs 3.16 Crore estimated cost. For public safety and security at the subway and with a view to gain back some income to the Pune Municipal Corporation, 39 shops will be constructed within. Ventilation and lighting has been provided for within the subway.</p> <p>B. Multi-storeyed Parking Facility for Vehicles :-</p> <p>Basement + five storeyed vehicular parking facility has been planned at the above-referred location. Within the basement and on 1st to 5th floors, four wheelers and two-wheeler vehicle parking is planned.</p> <p>A bus terminal arrangement is planned at the ground floor. Within the terminal, a space for in all 29 buses is planned, while including the space for about 400 four- wheelers and considering the two-wheelers, it will be a parking space to be made available for about 1000 vehicles.</p> <p>The building will have a built up construction of about 21538 Sq M of which 8375 Sq M has been constructed till now. It includes construction of 579 Sq M for post office, police post, PMC Transport Office, PMC office. In this scheme, one floor has been reserved for parking of state government vehicles.</p> <p>Pune Municipal Corporation will receive, for these two works, a grant, Rs 3.16 Crore for Pedestrian Subway and Rs 3.92 Crore for Parking Plaza, under the Jawaharlal Nehru National Urban Renewal Mission Programme of Central Government. Present scheme is for construction worth Rs 30.61 Crore and the rest of the works are to be completed through the Corporation's routine budgetary provisions.</p> |
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| 11 | Institutional arrangements | |
| | project preparation and implementation | Pune Municipal Corporation, Pune |
| | Consultant | Ar. Viswas Kulkarni Architecture |
| | Project Manager | Nil |
| | Best Practice Documented by | IL&FS |
| 12 | Benefits/ Outcomes of the project (100 words) | <ol style="list-style-type: none"> 1. Pedestrian and Vehicular Decongestion in Pune Station Area 2. Haphazard and crisscross Movement of Vehicles and Pedestrians eliminated by provision of subway. 3. Separated safe passage for pedestrians. 4. Identified proper and adequate pickup points for Autos, taxis and Buses 5. Road Widening and Smooth flowing of traffic in front of Station insured less queuing of Buses up to ST Stand. 6. Construction of Properly Planned Parking Plaza for two Wheelers and Cycle Parking. 7. Streamline Movement of Traffic 8. Adequacy of space for traffic movement 9. Additional Space for Bus, Car and two wheeler parking as well as Segregation of traffic 10. Multilevel Parking Plaza and Other surrounding parking slots is connected directory to Pedestrian Subway. |
| 13 | Enclosures to support the projects | <ol style="list-style-type: none"> 1. Map showing Network Prior to Project Implementation. 2. Subway level Plan 3. Upper Plan of Improved Junction 4. Pictorial Views |