TRAFFIC CONGESTION - CAUSES AND SOLUTIONS: A STUDY OF TALEGAON DABHADE CITY

1 SHEKHAR K. RAHANE, 2 PROF. U. R. SAHARKAR

1 PG student in Civil Engineering (Construction and Management), Dr. D. Y. Patil Institute of Engineering and Technology Ambi, University of Pune, Maharashtra, India.

2 Assistant Professor and PG Coordinator, Department of Civil Engineering, Dr. D. Y. Patil Institute of Engineering and Technology Ambi, University of Pune, Maharashtra, India.

shekharkrahane@gmail.com, upendra_saharkar@yahoo.co.in

ABSTRACT: Traffic congestion is a major urban transport problem. Due to traffic congestion, there is possibility of accidents because of poor traffic management. To eliminate road accidents and to save precious human life it is essential to find proper solution for traffic congestion. In this paper traffic congestion problem in Talegaon Dabhade, Tal-Maval, Dist-Pune is identified and studied for finding out the causes and proposed solution of it. In the recent years there has been a considerable loss due to the accidents to the precious human life and to the vehicles to some extent in Talegaon Dabhade.

KEY WORDS: Expressway, Traffic Congestion, Intelligent Transport Systems (ITS)

1. INTRODUCTION
Cities and traffic have developed hand-in-hand since the earliest large human settlements. The same forces that draw inhabitants to congregate in large urban areas also lead to sometimes intolerable levels of traffic congestion on urban streets and thoroughfares. Effective urban governance requires a careful balancing between the benefits of agglomeration and the disadvantages of excessive congestion. Road traffic congestion poses a challenge for all large and growing urban areas. The full report on which this summary is based aims to provide policymakers and technical staff with the strategic vision, conceptual frameworks and guidance on some of the practical tools necessary to manage congestion in such a way as to reduce its overall impact on individuals, families, communities and societies. Urban traffic congestion is a significant and growing problem in many parts of the world. Moreover, as congestion continues to increase, the conventional approach of “building more roads” doesn't always work for a variety of political, financial, and environmental reasons. In fact, building new roads can actually compound congestion, in some cases, by inducing greater demands for vehicle travel that quickly eat away the additional capacity? Against this backdrop of serious existing and growing congestion traffic control techniques and information systems are needed that can substantially increase capacity and improve traffic flow efficiency. Application of ITS technologies in areas such as road user information and navigation systems, improved traffic control systems and vehicle guidance and control systems has significant potential for relieving traffic congestions. Traffic congestion and the cost of providing mobility are compelling issues to planners, decision makers and members of both the business community and the general public transportation and the degree of efficiency with which it is accomplished, affects us all. Therefore we are constantly in search of solutions to our transportation problems that will give us not only increased mobility, but also greater economic productivity and a cleaner environment.

While new road construction can temporarily relieve congestion in the longer term it simply encourages further growth in car traffic through increased travel and a switch away from public transport. Beside this, suitable corridors in our cities for major roadwork’s is becoming more and more difficult, and many of the recent major projects involve turrets to minimize environmental disruption and community opposition, thereby raising costs. In the past decade, a new wave of Intelligent Transport Systems (ITS) has emerged around the world to provide additional tools to help solve our transport problems. Intelligent Transport Systems can produce major benefits in reducing congestion, accident and environmental impacts, and can make significant improvements to the efficiency of commercial and public transport fleets, and to inter-modal integration. ITS can also reduce the need for expensive new transport infrastructure by maximizing the efficiency of our existing facilities. Talegaon Dabhade is a historical city, a municipal
Talegaon Dabhade easily accessible from Mumbai. A couple of hours pleasant drive through the Bhor Mumbai and Pune via railway as well. By road important railway station on Pune-Lonavala local College is based at Talegaon. Talegaon is an like Indrayani College, polytechnic, Engineering to Tolani Maritime Institute campus organizations of the undergraduate program. Talegaon also is home supplements all practical and internship requirements bed multi-spatiality Talegaon General Hospital college was established in 1995 at Talegaon. The 500-Medical Education and Research (MIMER) medical educational campus at Ambi. Maharashtra Institute of international standard school ‘Heritage’ & and English medium. Talegaon also has regular schools of high standards in both Marathi and hence is called Talegaon. Another aspect that gives Talegaon an edge is that it has regular schools of high standards in both Marathi and English medium. Talegaon also has an international standard school ‘Heritage’ & educational campus at Ambi. Maharashtra Institute of Medical Education and Research (MIMER) medical college was established in 1995 at Talegaon. The 500-bed multi-spatiality Talegaon General Hospital supplements all practical and internship requirements of the undergraduate program. Talegaon also is home to Tolani Maritime Institute campus organizations like Indrayani College, polytechnic, Engineering College is based at Talegaon. Talegaon is an important railway station on Pune-Lonavala local railway. Talegaon railway station is well connected to Mumbai and Pune via railway as well. By road Talegaon located at a distance 135 km from Mumbai, a couple of hours pleasant drive through the Bhor ghat along the Mumbai Pune express highway makes Talegaon Dabhade easily accessible from Mumbai. From Pune, it is just 40 km away.

2. WHAT IS CONGESTION?

There is no single, broadly accepted definition of traffic congestion. One of the principal reasons for this lack of consensus is that congestion is both:

- A physical phenomenon relating to the manner in which vehicles impede each others’ progression as demand for limited road space approaches full capacity.
- A relative phenomenon relating to user expectations vis-à-vis road system performance. Both operational and user perspectives are important in understanding Congestion and its impacts. This report does not seek to select one approach to defining congestion over the other; they clearly both have uses when seeking to develop congestion management strategies. Ideally, urban transport policies should be developed on the basis that congestion is related to both:
  - The behavior of traffic as it nears the physical capacity of the road system.
  - The difference between road users’ expectations of the system’s performance and how the system actually performs. Urban traffic congestion must be understood in the wider context of city dynamics and agglomeration benefits. Traffic congestion in urban areas is often the outcome of successful urban economic development, employment, and housing and cultural, policies that make people want to live and work relatively close to each other and attract firms to benefit from the gains in productivity thus derived. There are many indications that, even though they may not be thrilled by the prospect, urban road users are prepared to live with crowded roads so long as they derive other benefits from living and working in their cities.

Congestion prevents us from moving freely and it slows and otherwise disrupts the conduct of business within urban areas. However, it is important to note that unfettered movement is not the primary benefit we derive from living in urban areas. Cities provide access to a wide range of activities, people, services, goods, markets, opportunities, ideas and networks. These benefits can be delivered either through speed or through greater proximity. Congestion may affect travel speed but in some circumstances, such as dense urban cores, congestion may both be expected and, to some degree, accepted. In these cases, cities have come to accept a degree of congestion and continue to get along relatively well as long as overall accessibility is high.

3. WHAT ARE THE IMPACTS OF CONGESTION?

Congestion involves queuing, slower speeds and increased travel times, which impose costs on the economy and generate multiple impacts on urban regions and their inhabitants. Congestion also has a range of indirect impacts including the marginal environmental and resource impacts of congestion, impacts on quality of life, stress, safety as well as impacts on non-vehicular road space users such as the users of sidewalks and road frontage properties.

4. REASONS BEHIND TRAFFIC CONGESTION

Inadequacy of traffic police
Traffic police in Talegaon Dabhade is inadequate in numbers compared to other mega cities in Maharashtra. All the cross roads need at least four traffic police at a time whereas in Talegaon it is seen that the number of traffic police are always short and due to the lacking of proper instruction the vehicles are getting trapped in traffic. Only two traffic police are working in the city which is inadequate.

**Narrow roads**

Streets of Talegaon are not that wide spread, due to illegal possession on the road they are getting narrow and becoming a reason behind traffic jam. So every possibility is there to expand the road as per their right of way to reduce traffic congestion. Moreover this will be less expensive and less time consuming due to land acquisition won’t be required in this process.

**Illegal Parking**

Illegal parking on the road has been creating congestion every day from petrol pump to Indrayani College, a distance of around one kilometer. On-road parking of vehicles is one of the main reasons behind serious traffic congestion on different parts of the Talegaon city.

**Increasing number of population**

All the areas under Talegaon city are facing an increasing number of population which is a bad indicator for the traffic management and this could be a vital reason behind traffic.

**Higher Purchasing power of the public**

Due to the higher purchasing power of the citizen of Talegaon Dabhade city the popularity of private transportation is increasing and but existing roads and highway are not supportive or changing according to the increasing number of vehicle. As a result vehicle congestion is increasing at an alarming rate.

**Improper planning of city development**

Development Plan has its long term city development planning. But that planning is not proper. Most of the time it is seen that some illegally ceased roadside land, but due to the vague development plan these kinds of movements are going in vain.

**Improper lane management**

Lane management is an important fact in managing the traffic in Talegaon. Many types of the vehicles try to overtake the vehicles even in the single undivided road. This is the main reason that the city roads are unequipped with the lane dividers which divide the lane into incoming and outing traffic.

5. **SOLUTION OF TRAFFIC JAM**

**Strict lane management**

Different lanes for different types of vehicles should be marked on the roads and law i.e. financial penalty should be imposed to make the drivers maintain the lane discipline.

**Restricting routes for Rickshaw**

Rickshaw should not be allowed in all the routes of the city. RTO should take some responsibility to control the increasing number of rickshaws by imposing registration fee and legal documentation.

**Financial penalty to the traffic law breakers**

Government can take such strict step like imposing financial penalty on the law disobeying drivers. They should be made to dissuade the drivers from certain Congestion-causing habit such as wrong overtaking, one way driving. Mobile court should be introduced to fine the truck drivers for disobeying traffic law and driving unfit truck. This kind of implication of law can mitigate the traffic jam in short run, but in long run all the people should be involved to create awareness and responsible to the society. Otherwise traffic jam solution is impossible.

**Supply and demand**

Congestion can be reduced by either increasing road capacity (supply) or by reducing traffic (demand) revealed that road capacity can be increased in a number of ways such as adding more capacity over the whole of a route or at bottlenecks, creating new routes, and improvements for traffic management. Reduction of demand can include, parking restriction, park and ride, congestion pricing, road space rationing, incentives to use public transport and introduction of e-education, e-shopping and home-based working options will reduce the number of people traveling.

**Increasing and developing the manpower (Traffic police)**

As the city is running with inadequate amount of traffic police than required, so it is the need of the hour for the authority to increase the number of traffic police. This step will create some scope for employment also. Only recruitment is not enough, they should be trained up for the betterment of the traffic management.

**Road widening**

Road widening is often advocated as ways to reduce traffic congestion. Roads of the city are narrow in different places, foe example road square near Hotel Kuldeep and in front of General Hospital there are several reasons like Hawkers on the footpath and some portion of the and illegal possession on the road or illegal structures. This kind of unlawful activity has to be prevented by imposing proper law and city development plan. Several steps of road widening have been undertaken. However some research indicates that road widening provides only slight reductions in urban traffic congestion.

6. **CONCLUSION**

Traffic congestion is a global as well as local problem. All over the world, the prime cause of traffic congestion is on street parking. In Talegaon, traffic congestion is a common issue like Mumbai. different infrastructural and managerial projects are granted for reducing traffic jam. However in Talegaon this type of policy is not addressed yet. Traffic congestion constraints can be ameliorated by embarking on various strategies such as road capacity expansion, improved road infrastructures, restricting routes for Rickshaw, financial penalty to the traffic law breakers and application of Fly over. Most
importantly, proper traffic management system along with appropriate implementation of traffic rules is necessary to mitigate the problems of traffic congestion in Talegaon Dabhade.

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