

# Peshawar Local Public Transport Strategy and Organization (Pakistan)

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**Abstract** - Developing countries like Pakistan are growing very rapidly. With a fast paced economy, therein lays an immense need to develop efficient transportation systems and networks to boost the global trade, connect the people, ensure safety and meet the customer demands. Peshawar, capital city of Khyber-Pukhtunkhwa province of Pakistan, lies just below the lower slopes of Hindu-Kush mountain range on the road leading to central Asian states, has recently seen surge in its population, partially due to migration. This population boom has burdened the transportation system of Peshawar which is already in fragile state. Hence, this paper looks to identify solutions to reshape the transportation network of Peshawar which will help in improving the mobility of the people and in bolstering the economic foot print not only in Pakistan but also in the world..

**Index Terms** - Local public transport; Peshawar; Pakistan.

## I. INTRODUCTION

Pakistan became an independent nation in 1947. Being a federal republic, this country comprises four provinces, a federally administered tribal area (FATA), and a separate federal capital territory of Islamabad. The four provinces are Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa (KPK).

Peshawar, the capital of province Khyber Pakhtunkhwa, is a very prominent geographical location. Since ancient times, this city has been a gate way to South Asia for the people coming from up north. At present, this city is the corridor to Afghanistan and is also used for NATO supply routes.

In the last three decades, the population of Peshawar increased threefold, with a growth rate higher than many other cities in Pakistan [1]. This one- dimensional growth has put high stress on the existing systems which are currently in operation. Transportation, being one of the systems, is also getting affected at large due to its inability to cope with the sudden increase in demand.

The aim of the paper is to provide first an overview of the current state of the local public transport in Peshawar and then a discussion regarding the elevation of the existing state to the improved state in the near future by emphasizing on the ways to achieve so. The research questions, based on the aforementioned discussion, can be formulated as follows to define the purpose of this paper. First, this paper explores the current state of the local public transport in Peshawar city. Then this paper explores the solution to address the burden on the existing transportation system.

This paper is structured as follows. First section will present the related background of Local Public Transport in Peshawar and looks at the causes behind the continuous disruption of the traffic flow. Second section analyses the problems existing for the different stakeholders: citizens of Peshawar, government authorities, transportation system operators, and the like. Third section provides a methodology to process the problems and the ways to generate the solutions. Fourth section presents some recommendations which will enable the system to fulfill the demand and reinforcing the public trust local public transportation. The last section concludes the paper by emphasizing the need to restructure the local public transportation in Peshawar.

## II. RELATED BACKGROUND

Peshawar is the capital city of the province Khyber Pakhtunkhwa (KPK) and it is one of the major administrative and economic hub in the area. With a population of over 2 million, Peshawar is like a large valley situated between the eastern edge of the Iranian plateau and the Indus Valley (Reference). Bound by the famous Khyber Pass on its western end, Peshawar is renowned as the city on the frontier. Its strategic location on the Crossroads of Central Asia and South Asia has made it one of the most culturally vibrant and vivacious cities in the region.

At national level, Peshawar plays an important role by connecting Pakistan with the neighboring Iran, Afghanistan, parts of central Asia as well as China. Looking at the local level, the supply of the road network doesn't meet the demand and requirements of the users, which is partly the cause behind the continuous disruption of the traffic flow [2].

The local administration has however remained ineffective as it couldn't inculcate safe mobility to the users or public concerned. For instance, on one major road in Peshawar, Jamrod road, the lack of enforcement poses road users to the critical situation as they try to cross the road from anywhere they like and neglecting the very basic existing structures such as underpass and pedestrian footpaths, overhead bridges. The heavy burden on the scarce supply is further aggravated by the lack of clear planning for pedestrian and crossing road (Mosel and Jackson, 2012).

Moreover, this encroachment on the behalf of the pedestrians is also contributing in traffic jam and disruption. The sufferers from the present state of traffic congestion and encroachment, include transporters and common citizens especially women and children.

The situation rings an alarm when it comes to emergency response services, i.e., ambulance and fire brigade. They sometime struck in traffic casting the damage of precious lives and property. Moreover, the immature driving habits and skills of the people and occupation of the footpaths by the shopkeepers and vendors are also adding to the worries and problems of traffic. These are some of the reasons that Peshawar is one of the polluted cities of Pakistan in term of traffic issues.

The findings of a survey, conducted by the Town Municipality Peshawar in 2012 (see Mosel and Jackson, 2012), highlights that 66% people in the city uses Public transportation for their daily mobility. The remaining, 25% people use private cars and the 9% use other services such as taxi, rickshaw etc. The statistics shows that majority is dependent on Public transportation. Therefore the city needs a special focus and attention for the improvement of transport system in the city (Adeel, Anthony and Zhang, 2014).

### III. PROBLEM ANALYSIS

A visit to different congested areas like Hayatabad Chowk, Gora Qabrastan, University Town Chowk, Suri pull, Hasht Nagari, Bacha Khan Chowk and different markets including historic Qissa khwani Bazaar, Chowk Yad Gar, Pipal Mandi, Kohati Bazaar, Gunj Gate, Board Bazar, Karkhano Markets, Kohat Addha, haji camp and Motorway connection. Based on this, following problems have come to notice.

#### 1) Time table of transportation

As there is no public department for transportation, therefore no time table is available for users. However, the Union Sadar selects specific people on every stand (depot) who are responsible for Frequency. They also don't have any specific time table. Their system works on one principle i.e. first comes first get (i.e. first come first bases). The one who arrive early to the depot, his number is early otherwise he has to wait. That's why lot of transporters doesn't follow any rules and regulations and just moving on the routes. All the transit modes belong to individuals who want to work more and get more. This has brought the system to lower standards. They wait for passengers in stops which increase travel time difficulty.

#### 2) Coordination with other transit units

There is no coordination among the buses. Sometime traffic police start checking for making it sure that every bus must run from the Depot under proper number, But it is hard to handle.

#### 3) Longer travel time

Due to unnecessary stops and waiting, it increases the travel time and complexity. This is pushing people to think about own cars and taxis. Again more cars are increasing and multiplying the problems of congestion.

#### 4) Problem with implementation of traffic laws

The local administration has failed to enforce the law in Peshawar, and that's due to intuitional and functional way of handling traffic. Traffic signals are meant to be broken, wearing seatbelts is hectic and if someone needs to get somewhere in a hurry, they do not think twice about wreaking havoc by speeding and cutting other cars in order to move ahead. There is no defined speed limit on the roads, and even if there is, there is no enforcement. Same goes with seatbelts, which are provided in every car in order to ensure safety of the driver and passengers and overloading is another problem.

Motorcycles have a whole other world of issues which create problems not only for themselves but for car owners as well. Helmets are not worn, creating a huge safety risk and driving in the designated lane is something most people do not even consider doing.

#### 5) Road congestion

Peshawar is increasingly transforming into a city of congestion and traffic related problems due to growing number of vehicles coupled with lack of expansion in the existing road network and ineffective traffic management. From 1

From 1998-2009, the proportion of increase in number of vehicles is 126.4 % while that of road network expansion is only 0.85 %. The greater number of road-blockages and check posts created by the security personnel for security reason which cause of traffic jams in the city. Furthermore, the situation has caused extra fuel consumptions and delays [2].

#### 6) Lack of existing infrastructure

Current transportation infrastructure is not able to facilitate the user. There is no facility of Bus Stops and due to Narrow lane. There is always congestion [6].

#### 7) User information system

There is no provision of time table and stops. And there is no coordination among operators about route or frequency. So the system works without any planning and strategy. And due to lack of information the daily transport used face a lot of problem in form delay and comfort.

#### 8) Project realization

In Pakistan, federal government allocates funds to respective provinces on the basis of population rather than on the basis of need. This fund is further distributed and allocated for different projects by chief-minister of the particular province.

The previous governments didn't care to invest in the transportation sector, and the current situation is the result of those mistakes. Nonetheless, since 2005, the government has realized the magnitude of transportation sector and has launched few projects such as connecting main city with the suburbs through flyovers and bridges thus mitigating the problem of congestion traffic jams. But it still needs a lot of improvements; in methodology I provide the solution and what still need to improve [7].

### **9) Uncontrolled Spatial development**

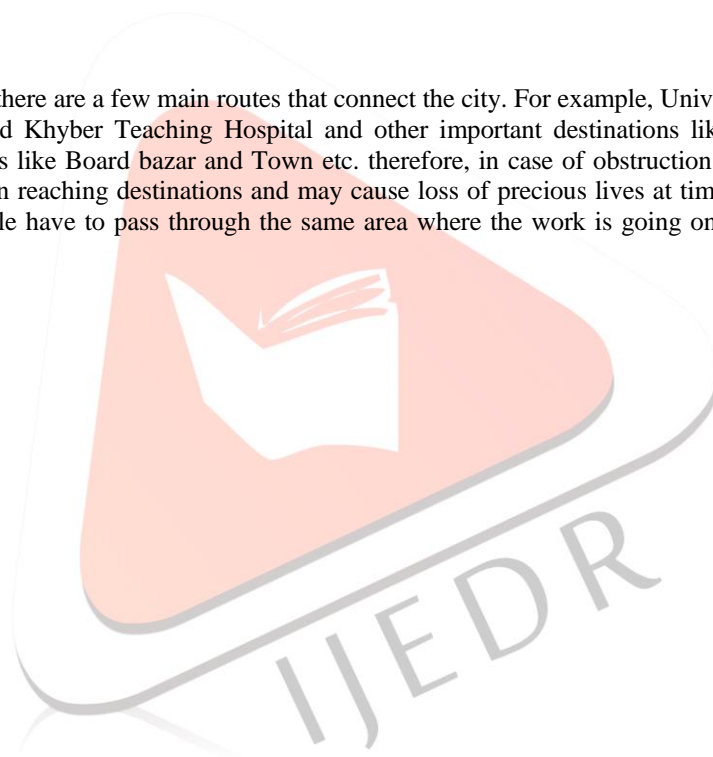
It has been noted from time to time that whenever a new road (bypass to existing network) is provided for a certain region, it is not used for the purpose it is meant for. Rather the population diverts towards that region as it directly affects the cost of land in the surroundings where it is passed through and people ought to get maximum benefits out of it. An example is Ring Road Peshawar which was meant for bypassing the city and reduce travel time. But due to lack of control of local authorities, markets and restaurants have been built on both sides of the road causing delays rather than saving time.

### **10) Traffic density on main route**

The existing road network of Peshawar is flawed because it takes all the traffic from secondary routes and puts it to one main route which also acts as a connection with the surrounding cities. Traffic from Karkhano market, Bara Road, Warsak Road, Charsadda Road and Kohat road is collected to Khyber Road which then connects to GT Road or Motorway and is the only road that carries the total traffic load of Peshawar. No alternate for this road exist and hence, is causing delays in providing basic facilities to common public.

### **11) Lack of main routes**

As evident from the heading, there are a few main routes that connect the city. For example, University Road is only connection of Hayatabad with university and Khyber Teaching Hospital and other important destinations like Board of Intermediate and Secondary Education and markets like Board bazar and Town etc. therefore, in case of obstruction at any point, the whole route will be closed and cause delays in reaching destinations and may cause loss of precious lives at times. In addition, if there is any ongoing construction work, people have to pass through the same area where the work is going on and no concept of safety etc exist (Figure, 1).



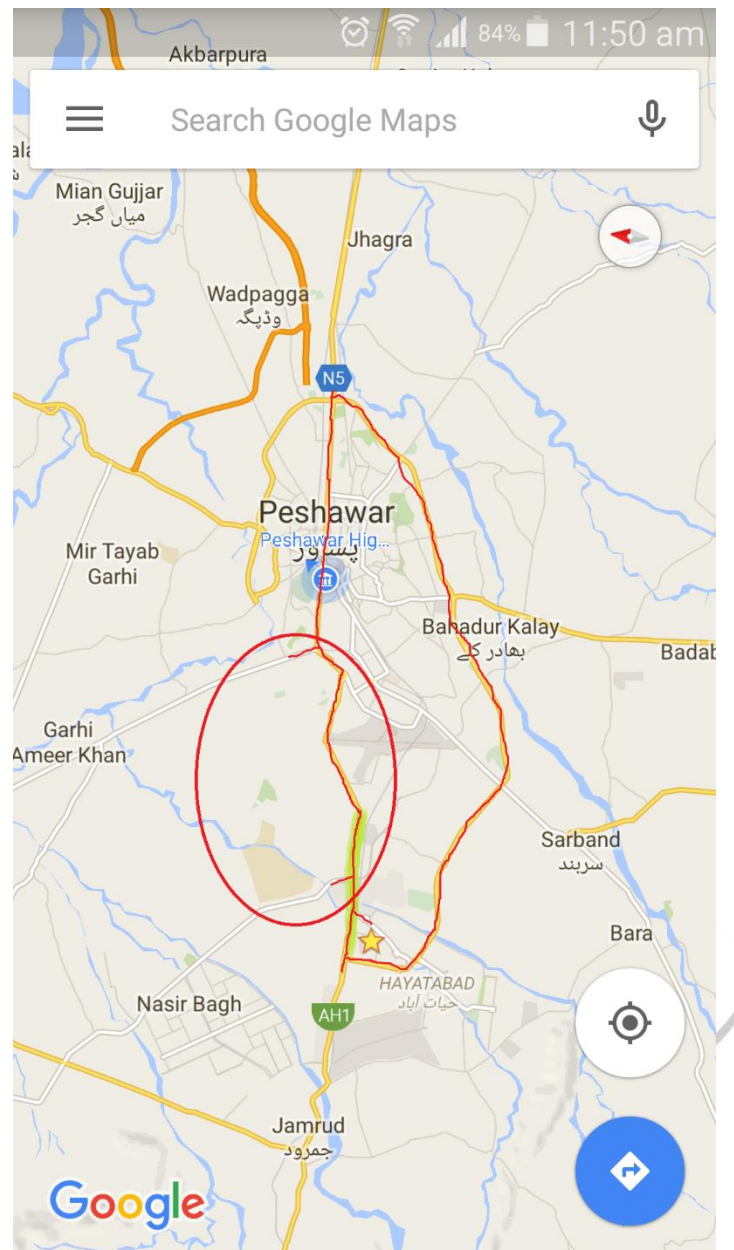


Figure 1, Lack of main route (Congestion Problem)

#### IV. METHODOLOGY

The first hand solution could be the reduction of traffic and improvement of transportation system. The first part of the paper explains how the problem of congestion could be solved. To reduce the traffic on GT Road, the administration should provide alternative provisions like Northern by pass, extension and rehabilitation of Ring road and GT Road and improved rail transit corridors. For the second problem of public transport, multi-modal transportation system can prove to be a crucial solution.

First case, the distance from Point A “Karkhano market” to Point B „Haji camp adda” is around 22Km via GT Road, require approximately (Personal survey based) 1 hour in public transport (see figure 2). This is because of traffic jam and congestion. This problem can be solved if the proposed following measures are taken into account. Up gradation of GT road from 2 to 3 lanes, dedicating lanes for the busses, and making proper bus stops at specific locations so that main traffic stream doesn't get unnecessary disruptions. Specific parking places in busy markets and public places could be allotted so that people may not park their vehicles on main roads.

Second case, of transportation from Point A “Karkhano Market” to Point B “Motorway chowk” through Ring Road can provide direct and uninterrupted route (see figure 3). If this road gets upgraded from 3 to 4 lanes and its condition is improved which allow around 70km/h then it can mitigate traffic congestion on the GT road. People from Hayatabad and Karkhano market will take this route directly to Kohat adha, Haji camp adha and Motorway chowk. As this road is a bit busy with heavy traffic to Afghanistan so dedication of light and heavy traffic lanes are suggested here.



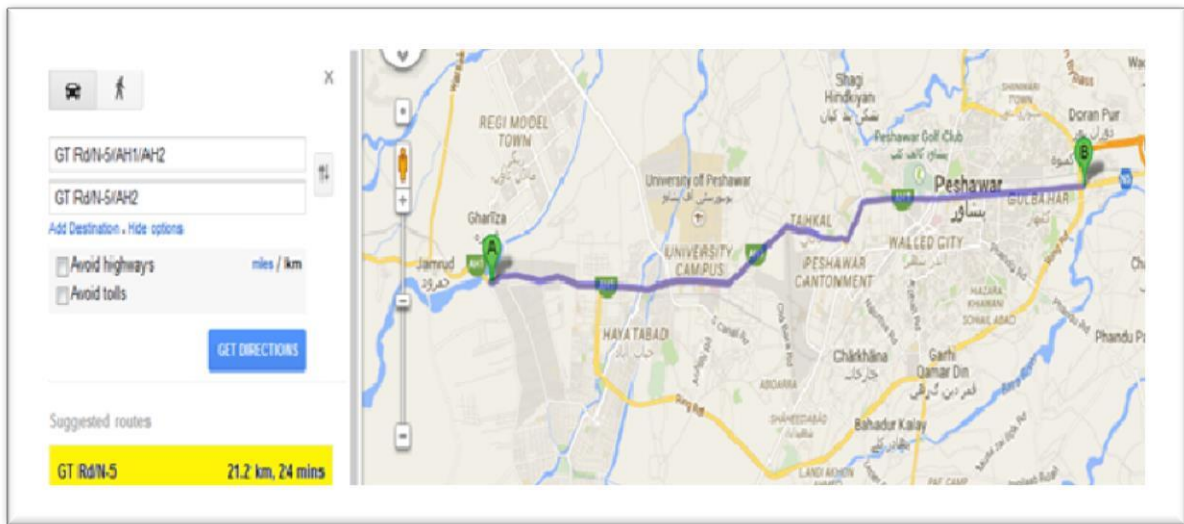


Figure 2, Figure showing the route from Karkhano market to Haji camp adda via GT road with a route length of 21.2 km (source: Google Maps, 2015).

Third case, Rehabilitation, renovation; and restarting of existing rail service on existing railway track the rail track is from Peshawar to Landi Kotal (see figure 4), which, if renovated can be used not only for goods transportation to Afghanistan but also for local transportation within the city as well. The track passes through many areas within the city but trains do not operate on it. So there is no local train system in Peshawar. Rehabilitation, renovation and restarting resumption of existing rail track is suggested which can solve many problems of congestion and transportation system. The basic infrastructure is already exists and with a nominal amount of investment and political will, the system can be functional again.

## V. RECOMMENDATIONS

After a detailed problem analysis, the following recommendations are proposed which-if realized-will mitigate the current problems and improved the mobility for the people living in Peshawar.

**1) Proposed lane Northern by pass:** The total length of this lane is around 20 Km. One positive aspect of this lane is that it will not pass through the main city rather it will connect the outskirts of the city directly to Karkahno market, university road motorway. It will provide direct access to the people of Mardan, Charsadha and Nowshera to Karkhano, University town and Hayatabad. If this lane is functional, it can divert most of the traffic from GT road and could solve the problem of congestion.

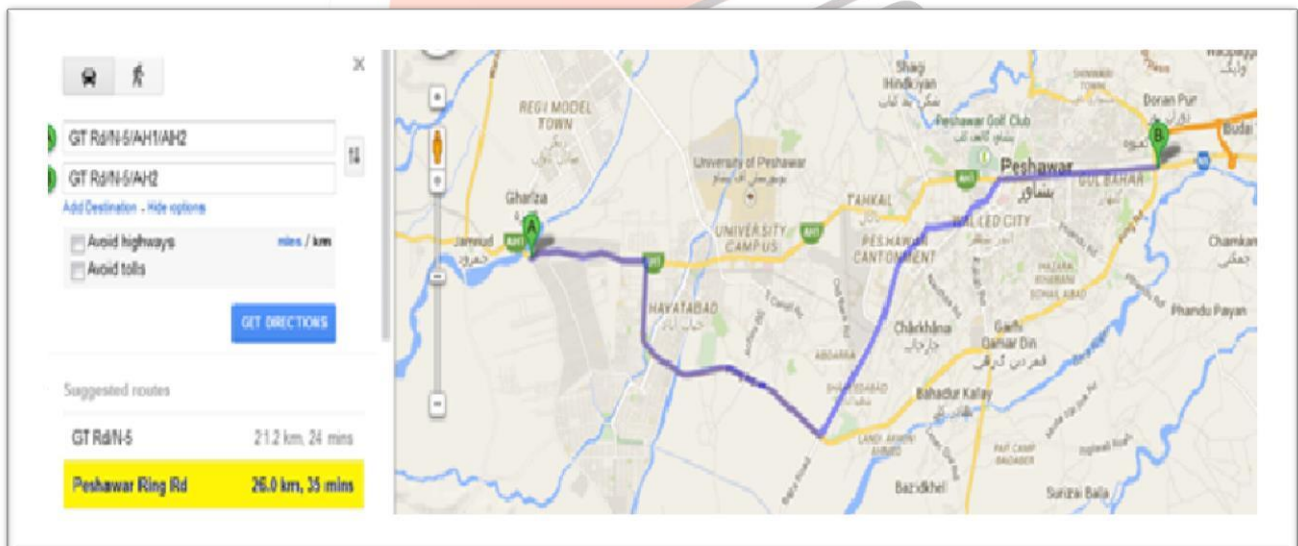


Figure 3, Figure showing the route from Karkhano market to Motorway Chowk via Peshawar ring road with a route length of 26.0 km (source: Google Maps, 2015).

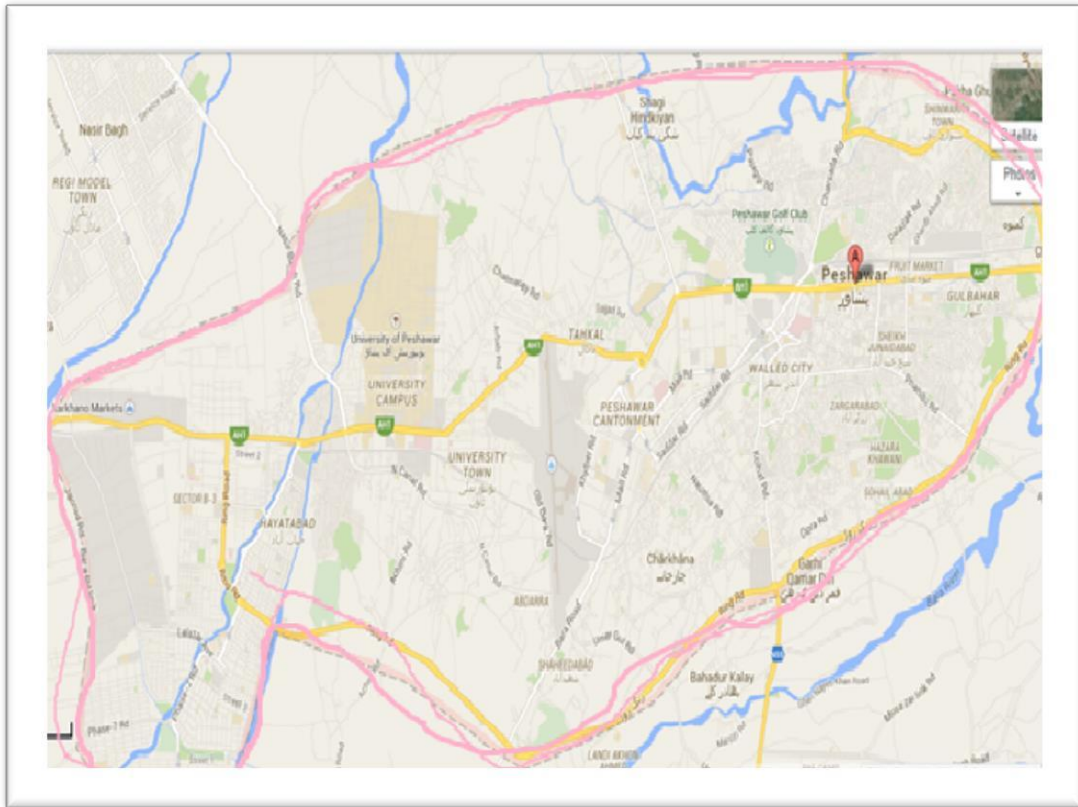


Figure 4, Figure showing the existing railway track which is not in operation at the moment

## 2) Required efforts from Government

In Peshawar we have old transportation system of 1972. In 1998 they just made extension of the roads. But no one seems serious in upgrading the transportation system; as a result, the system is operating at a lower level. Public transport system can be improved by taking some initiatives like education, local awareness, training to traffic police, guidance and priority to Public transport etc.

## 3) Multi modal transport concept (Light Rail and Bus rapid transit)

The city is having an existing rail track parallel to GT road up-to Landi kotal, passing through Town, Airport, Peshawar Sadar, Gulbahar and Haji camp. If the rail is again, it, can reduce the traffic on GT road. It will also provide easy access to different places within the city.

**4) Bus rapid transit (BRT):** Installing a Priority lane technique can solve the main problem of congestion. This will attract more and more people and will ultimately replace the entire old model with a new comfortable; low floor buses, environment friendly engine, low consumption and higher performance vehicle [8].

**5) Identify both vehicle and driver:** Public transport buses can be driven by different drivers depending on their work shift. To keep track of which driver is on particular bus is often a manual procedure; subject to human errors. In order to schedule efficient bus services, it is important to have real time information on availability of the vehicles and the drivers.

**6) Well designed bus stops with information:** After every 300-400 meter there should be designed bus stop with full city map and time table of the buses. As the city is quite dense every stop in the main city should have a capacity of around 30 people.

**7) Division of different routes in different companies:** It is quite necessary that every location's bus stops and busses should have a proper and distinct color to avoid confusion, because some proportion of the population is illiterate and they cannot read. It will help those identifying required busses.

**8) Vehicle detection and management:** The entire transport vehicles should be connected with a central control system through an installed modern navigation and communication system. This will make the system integrated, and coordination can be improved between the transporters and the city management.

**9) Pedestrian (foot path) and cycle track:** There is no dedicated lane for cyclist and pedestrian which some time produced some problems. So to avoid any problem, there should be clearly defined cycle lane and pedestrian path [9].

**10) Coordination and centralization:** The system needs to be handled and monitor through professional, who can decide on Demand the routes, frequency, timetable and manage everything to prioritize public transport and Build user trust on public transport.

## VI. CONCLUSIONS

Efficient transportation system is crucial for connecting people and for economic growth of a region. Peshawar hosts over two million people and its current transportation network is inadequate to deal with such an enormous population. The shortcoming of existing structure is solely due to negligence of previous governments to upgrade the network to modern standard lines

One of the major sectors that make a city functional efficiently and effectively is the transport sector. Connectivity is the Key for spurring development and growth. But the transportation sector is an ignored domain as yet, and beset with many problems. Prevailing transport systems are inadequate and with limited capacity, and hence need serious up gradation. Existing supply cannot satisfy the current demand. Population increase result in more travel demand, which need to be managed through adequate planning and resources allocations. Traffic problem is undoubtedly one of the biggest problems the inhabitants of Peshawar faced on a daily basis. With a weak traffic management, the problem gets worsened when the management doesn't have enough land for possible expansion and up gradation of the existing transportation infrastructure.

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