## " Traffic Congestion Problem in Ramallah and Al-Bireh Cities:

## How to Mitigate the Congested Arterials in the Two Cities "

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## **Abstract:**

This study has addressed the problem of traffic jams in Ramallah and Al-Bireh Cities in terms of its reasons and the manner in which it must be handled; as Ramallah and Al-Bireh are located in the center of the West Bank within the chain of central mountains of Palestine. These both cities are considered the most significant political and economic centers because of the concentration of governmental departments and ministries; which therefore has made them two distinguished centers among other governorates. Road network in both cities was studied in terms of road characteristics and the main criteria followed during road cutting and renovation, taking into consideration the number of cars and population in both cities, in addition the ongoing increase of such numbers and their influence on creating traffic jams. Moreover, this study has linked this problem with natural and human factors affecting traffic movement on roads.

A set of research methodologies was used for studying all the problem sides. The historical approach was used for following-up the development of road network, as well as the factors influencing it during last periods. Moreover, the descriptive approach was used for describing the problem in terms of all aspects related to the subject of the study. After collecting information from its sources, it was analyzed by using the quantitative approach through using quantitative methods. In addition, the study has also used on field work in dealing with such problem in more than one location.

This study has concluded a set of findings which indicated that both cities suffer from traffic jams as a result of several factors including: lack of commitment to the laws, whether by walkers or the drivers, increase of trespassing on roads, whether by residents or traders especially in the city center; which makes walkers use roads, and they contribute to the slow and obstruction of traffic movement. The study has also indicated that queuing on main road sides is one of the reasons of traffic jams which leads to reducing road width, and so the road is transformed from being a two-sides

road into a single-sides road in most cases. Moreover, the existence of several economic establishments on road sides and their surroundings contributes to increasing the density of citizens stopping by such establishments; which therefore leads to obstructing traffic movement and then causing traffic jam.

The study has also revealed that the areas which have higher population rates suffer from more traffic jams in comparison with other areas which have lower population rates. It was also obvious that the availability of bypass roads to be used when necessary, particularly at the time of traffic congestion, assists in reducing traffic jams. This study has also indicated that the main roads which have bypass roads have less traffic jams in comparison with roads which lack any bypass roads. Therefore, it is necessary to re-plan the directions of road networks, raising awareness of citizens and drivers, strictly applying the rule of law on violators, finding spaces to meet the massive number of cars parking on road sides, as well as striving for separating road sides for providing freedom of movement in every direction.