Please Embedding Roundabout on the City!: Roundabout Planning Program for Reducing Air Pollution in the Urban Planning Stage

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As a solution to the global warming problem, the change of the traffic sign system was studied. It was hypothesized that the traffic system would not only reduce the amount of exhaust gas, but also reduce time and maintenance cost, after knowing the traffic sign system at the roundabout and the intersection. In order to study whether this hypothesis is correct, first of all, it is crucial to understand the relationship between fluid mechanics and the traffic flow at the intersection in Sejong City. Second of all, the volume of traffic was investigated at each roundabout and intersection. The concept of the roundabout and intersection and the current situation in Korea was analyzed for the effects of each installation. By comparing these, this is to investigate how much effective the traffic system is than the current traffic system so that the air pollution could be improved because of the reduction of exhaust gas emitted. This study is expected to provide feasible solutions to traffic jams and traffic accidents in modern society based on the effective traffic system by comparing and analyzing the system of the roundabout and intersection.

Awards Won: