



Transit Signal Priority

The information below is provided for reference and context. Exploring the idea and implementing any strategy of TSP would require much more involvement from individuals, stakeholders and the community at large.

"Transit Signal Priority (TSP) is simply the idea of giving special treatment to transit vehicles at signalized intersections. Since transit vehicles can hold many people, giving priority to transit can potentially increase the person throughput of an intersection.

*A **passive** priority strategy seeks to favor roads with significant transit use in the area-wide traffic signal timing scheme. Timing coordinated signals at the average bus speed instead of the average vehicle speed can also favor transit vehicles.*

*By contrast, an **active** priority strategy involves detecting the presence of a transit vehicle and, depending on the system logic and the traffic situation then existing, giving the transit vehicle special treatment. The system can give an early green signal or hold a green signal that is already displaying. An active system must be able to both detect the presence of a bus and predict its arrival time at the intersection. Near-side stops can complicate the prediction of intersection arrival times. Real-time control strategies can consider not only the presence of a bus but the bus adherence to schedule and the volume of other traffic. One common strategy is to give priority only to late buses (compared to the scheduled time) but not to early buses. This strategy optimizes schedule adherence (and therefore waiting time) rather than running time.*

There are many different options for signal priority logic. Real-time, adaptive systems can incorporate information on traffic flow, flow coordination, bus schedule adherence, and prior bus arrival times.

A queue jump lane is a short stretch of bus lane combined with traffic signal priority. The idea is to enable buses to by-pass waiting queues of traffic and to cut out in front by getting an early green signal. A special bus-only signal may be required. The queue jump lane can be a right-turn only lane, permitting straight-through movements for buses only. A queue jump lane can also be installed between right-turn and straight-through lanes. A

similar arrangement can be used to permit a bus to cross traffic lanes to make a left turn immediately after serving a curb-side stop.”

*Source  Signal Priority