



Low-Speed Automated Vehicle (LSAV) Screening Checklist

DESIRABLE ROUTE CHARACTERISTICS

Low traffic volumes and speed limits



LSAVs have low speeds (25 mph or less). Only roads with low traffic volume and a speed limit less than 25 mph should be considered.

Low passenger ridership



LSAVs have low speed and passenger capacity. Routes with large ridership for conventional transit should not be considered.

Well-maintained pavements and clear pavement markings



LSAVs perform best on roads with clear pavement markings. Well-maintained pavements along the route are ideal for LSAVs.

Few unsignalized intersection turning movements



Unsignalized intersection turns tend to be problematic for LSAVs. Signalized intersections are safer in general.

Minimize visual obstructions and vegetation near the road



Removing visual obstructions will improve system performance. Vegetation should be trimmed. Falling leaves from trees may create unintended automated stops in the autumn.

Dedicated right of way for LSAVs



Given LSAVs' low speeds, negative safety interactions with other road users should be minimized by providing a dedicated right of way for LSAVs; for example, designated lanes and controlled access routes.

Signal Phase and Timing (SPAT) information for signalized intersections



If traffic signals are present along the route, providing transit signal priority (TSP) helps ensure the LSAV can clear the intersection during a green phase. Since LSAVs' speeds are much slower than most vehicles, TSP can ensure they are not trapped in an intersection during a yellow or red phase.

ORGANIZATIONAL NEEDS

Experienced operators



Experienced human operators or bus drivers are ideal for serving as safety monitors.

Provide appropriate operator training



Besides standard training for transit operators, additional training should include sensitivity training for passenger safety, limitations of the automated system, and potential LSAV-specific risky situations and countermeasures.

Safety monitoring and feedback loop



A transparent, precise, and efficient feedback loop between trained operators, deployment organizers, law enforcement, and LSAV manufacturers would be helpful. The feedback from operators should include results and concerns from ongoing safety monitoring of the deployment. Their hands-on experience with the automated system can also be valuable for the deployment.

ADDITIONAL GUIDANCE TO AUTOMATED TRANSIT

Higher operational speeds



For automated transit systems with higher operational speeds, the speed limit of road segments along the route should not exceed the operational speeds of the systems.