CLAIMS

1. A method of maneuvering a vehicle in an autonomous driving mode, the method comprising:

maneuvering, by one or more processors, the vehicle in the autonomous driving mode along a route using pre-stored map information identifying a plurality of keep clear regions where the vehicle should not stop but can drive through in the autonomous driving mode, wherein each keep clear region of the plurality of keep clear regions is associated with a priority value;

identifying, by the one or more processors, a subset of the plurality of keep clear regions based on the route;

generating, by the one or more processors, a speed plan for stopping the vehicle based on the priority values associated with the keep clear regions of the subset of the plurality of keep clear regions, wherein the speed plan identifies a future location for stopping the vehicle prior to a destination of the speed plan without stopping at the subset of the plurality of keep clear regions; and

using, by the one or more processors, the speed plan to stop the vehicle.

2. The method of claim 1, wherein generating the speed plan includes adjusting a default minimum clearance value for a given keep clear region of the subset of the plurality of keep clear regions, the given keep clear region has a lowest priority value of all of the keep clear regions of the subset of the plurality of keep clear regions, and the default minimum clearance value defines an acceptable amount of overlap with the given keep clear region.

3. The method of claim 1, wherein generating the speed plan includes adjusting a given keep clear region of the subset of the plurality of keep clear regions, and the given keep clear region has a lowest priority value of all of the keep clear regions of the subset of the plurality of keep clear regions.

4. The method of claim 1, wherein the speed plan avoids stopping within a particular keep clear region of the subset of the plurality of keep clear regions, the particular keep clear region is associated with a highest priority value of all of the keep clear regions of the subset of the plurality of keep clear regions.

5. The method of claim 1, wherein at least one of the subset of the plurality of keep clear regions corresponds to an active crosswalk and at least one of the subset of the plurality of keep clear regions corresponds to an inactive crosswalk, and the active crosswalk is associated with a higher priority value than the inactive crosswalk.

6. The method of claim 1, wherein at least one of the subset of the plurality of keep clear regions corresponds to an active crosswalk, at least one of the subset of the plurality of keep clear regions corresponds to an intersection, and the active crosswalk is associated with a higher priority value than the intersection.

7. The method of claim 1, wherein at least one of the subset of the plurality of keep clear regions corresponds to an inactive crosswalk, at least one of the subset of the plurality of keep clear regions corresponds to an intersection, and the intersection is associated with a higher priority value than the inactive crosswalk.

8. The method of claim 1, wherein at least one of the subset of the plurality of keep clear regions corresponds to an area that crosses a lane of traffic.

9. The method of claim 1, wherein at least one of the subset of the plurality of keep clear regions corresponds to a posted “keep Clear” or “Don’t Block the Box” area.

10. The method of claim 1, wherein at least one of the plurality of keep clear regions correspond to a railroad crossing.

11. A system for maneuvering a vehicle in an autonomous driving mode, the system comprising one or more processors configured to:

maneuver the vehicle in the autonomous driving mode along a route using pre-stored map information identifying a plurality of keep clear regions where the vehicle should not stop but can drive through in the autonomous driving mode, wherein each keep clear region of the plurality of keep clear regions is associated with a priority value;

identify a subset of the plurality of keep clear regions based on the route;

generate a speed plan for stopping the vehicle based on the priority values associated with the keep clear regions of the subset of the plurality of keep clear regions, wherein the speed plan identifies a future location for stopping the vehicle prior to a destination of the speed plan without stopping at the subset of the plurality of keep clear regions; and

use the speed plan to stop the vehicle.

12. The system of claim 11, wherein generating the speed plan includes adjusting a default minimum clearance value for a given keep clear region of the subset of the plurality of keep clear regions, the given keep clear region has a lowest priority value of all of the keep clear regions of the subset of the plurality of keep clear regions, the and default minimum clearance value defines an acceptable amount of overlap with the given keep clear region.

13. The system of claim 11, wherein generating the speed plan includes adjusting a given keep clear region of the subset of the plurality of keep clear regions, and the given keep clear region has a lowest priority value of all of the keep clear regions of the subset of the plurality of keep clear regions.

14. The system of claim 11, wherein the speed plan avoids stopping within a particular keep clear region of the subset of the plurality of keep clear regions, and the particular keep clear region is associated with a highest priority value of all of the keep clear regions of the subset of the plurality of keep clear regions.

15. The system of claim 11, wherein at least one of the subset of the plurality of keep clear regions corresponds to an active crosswalk and at least one of the subset of the plurality of keep clear regions corresponds to an inactive crosswalk, and the active crosswalk is associated with a higher priority value than the inactive crosswalk.

16. The system of claim 11, wherein at least one of the subset of the plurality of keep clear regions corresponds to an active crosswalk and at least one of the subset of the plurality of keep clear regions corresponds to an intersection, and the active crosswalk is associated with a higher priority value than the intersection.

17. The system of claim 11, wherein at least one of the subset of the plurality of keep clear regions corresponds to an inactive crosswalk, at least one of the subset of the plurality of keep clear regions corresponds to an intersection, and the intersection is associated with a higher priority value than the inactive crosswalk.

18. The system of claim 11, further comprising the vehicle.

19. A non-transitory computer readable medium on which instructions are stored, the instructions, when executed by one or more processors, cause the one or more processors to perform a method of maneuvering a vehicle in an autonomous driving mode, the method comprising:

maneuvering, by one or more processors, the vehicle in the autonomous driving mode along a route using pre-stored map information identifying a plurality of keep clear regions where the vehicle should not stop but can drive through in the autonomous driving mode, wherein each keep clear region of the plurality of keep clear regions is associated with a priority value;

identifying, by the one or more processors, a subset of the plurality of keep clear regions based on the route;

generating, by the one or more processors, a speed plan for stopping the vehicle based on the priority values associated with the keep clear regions of the subset of the plurality of keep clear regions, wherein the speed plan identifies a future location for stopping the vehicle prior to a destination of the speed plan without stopping at the subset of the plurality of keep clear regions; and

using, by the one or more processors, the speed plan to stop the vehicle.

20. The medium of claim 19, wherein generating the speed plan includes adjusting a given keep clear region of the subset of the plurality of keep clear regions, wherein the given keep clear region has a lowest priority value of all of the keep clear regions of the subset of the plurality of keep clear regions.