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Walker et al.

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(54) **METHODS AND SYSTEMS FOR DETERMINING AND CONTROLLING VEHICLE SPEED**

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(58) **Field of Classification Search**
CPC G05D 1/0223; G05D 1/0219; G05D 2201/021

See application file for complete search history.

(57) **ABSTRACT**

Methods and systems of determining and controlling a vehicle travel speed on a roadway determine a grade of the roadway at defined intervals along the roadway; calculate a maximum straight line vehicle speed for each defined interval based on the determined grade and vehicle performance data; determine a radius of curvature and a superelevation of the roadway for each defined interval; determine a lateral friction coefficient for a vehicle/roadway system; calculate a maximum cornering vehicle speed for each defined interval based on the curvature, superelevation, and lateral friction coefficient; calculate the travel speed for each defined interval based on the maximum straight line vehicle speed and the maximum cornering vehicle speed; and control the speed of the vehicle so that it does not exceed the calculated travel speed for each defined interval.

29 Claims, 11 Drawing Sheets

