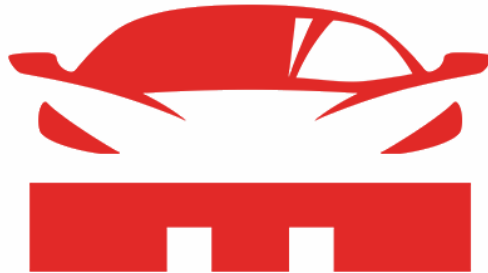
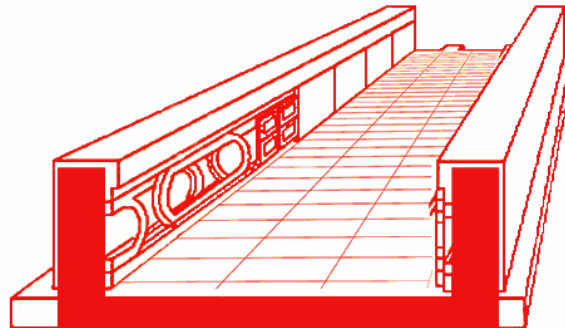


Mag-Lev Conversions for Divided Roadways & Railways



Helping the planet by transporting cars, buses, and tractor-trailers on drive-on-drive-off-sleds that speed along at up to 350 miles per hour – without burning any fuel – suspended on solar-powered, mag-lev guideways formed from durable, quick-to-assemble waste plastic extrusions using rights-of-way and existing infrastructure on interstate freeways and divided highways



Useful Background: Please view the following YouTube videos:

The fastest train ever built: Japan's 603 km/hr (372 mph) SCMagLev Train (11:34):

<https://www.youtube.com/watch?v=XjwF-STGtfE>

Arvin Ash: The Quantum Mechanics of Superconductivity (13:49):

<https://www.youtube.com/watch?v=vruYFOIM1-Q>

Bottom Line Up Front (BLUF)

Mag-Lev technology could assist the United States' transportation sector achieve the goals set forth by the Paris Accords on Climate Change. This technology could be integrated into existing transportation corridors and become functional within a few years, after the initial start of construction. The mag-lev propulsion, levitation, and guideway system (based on the Japanese SCMagLev design) could be incorporated into a single guideway unit, using U.S. units of measure, 48 feet long, 14 feet wide (with a 10-foot-wide traffic lane for transport purposes),



and 6 feet tall – which would fit on a standard U.S. flatbed trailer for easy transport to installation sites.

The power horse of the Japanese SCMagLev design, its superconductors, could be incorporated into sleds measuring 16 feet long, 8.5 feet wide, and 3 feet tall – again, easily accommodated on a flatbed trailer for transport, with three sleds placed end to end – and of sufficient length to carry full-size passenger vehicles, mini vans, and SUVs. Vehicles of greater length – with tandem trailers at 109 feet in length – will be able to be accommodated by up to seven interlocking sleds.

Mag-Lev Solutions has identified an inexpensive, durable material made of waste plastics that appears to have the structural integrity necessary to be used for building guideways and sleds.

Thus, utilization of this technology, using an inexpensive building material, that could be quickly assembled in a Lego-set fashion, could make mag-lev construction cost competitive with roadway construction and assist in making major strides toward addressing the climate crisis by:

- greatly reducing the use of fossil fuels and their remissions,
- significantly reducing vehicle maintenance and operating costs,
- extending the life and usefulness of existing vehicles,
- using levitation to reduce dynamic weight loads on roadbeds and guideways, thus reducing maintenance costs and extending their lifespans,
- slashing travel times between destinations,
- reducing traffic congestion and increasing the capacity of existing roadways due to the speeds at which the mag-lev sleds would travel (up to 372 miles per hour), thus allowing five times as many vehicles per hour to travel down a single roadway lane compared with cars traveling down the same lane at 70 miles per hour,
- reducing the environmental impacts associated with road construction and vehicle manufacturing and operation,
- offering high levels of safety, since all sleds on a guideway would travel at the same speed which would virtually eliminate the possibility of accidents,
- operating quietly (a mag-lev train traveling at 200 miles per hour passes by at approximately 73 decibels and 80 decibels at 300 miles per hour),
- the ability to climb steep gradients – up to 10 percent – compared with a maximum grade of 7 percent for long-haul trucks loaded to their maximum weight of 80,000 pounds, and
- the ability to operate entirely on renewable power, with additional capacity to provide surplus power to the electric grid which, again, would reduce the use of fossil fuels.

It could be possible, therefore, through this one initiative alone, to not only to begin meeting the Paris Accord's 2030 emission reduction goals to limit global warming to no more than 1.5° Centigrade compared to pre-industrial levels, but to possibly meet its 2050 emission reduction goals as well, while significantly reducing the plastic waste that has accumulated in even the most remote areas of the globe.