

Engineering Math Question

Conditions:

A backhoe weighing 22 tons is on top of a lowboy trailer and heading east on Interstate 70 near Hays, Kansas.

The extended shovel arm is made of hardened refined steel and the approaching overpass is made of commercial-grade concrete, reinforced with 1½ inch steel rebar spaced at 6 inch intervals in a criss-cross pattern layered at 1 foot vertical spacing.

Solve:

When the shovel arm hits the overpass, how fast do you have to be going to slice the bridge in half?

(Assume no effect for headwind and no braking by the driver...)

Extra Credit:

Solve for the time and distance required for the entire rig to come to a complete stop after hitting the overpass at the speed calculated above.

Yes, you can neglect friction.

I couldn't solve it either.....but who cares;

The pictures are great!

The driver was on his cell phone.

