

At the same time design progress makes it possible to produce a vehicle offering greater safety to passengers, the driver and other traffic.

Key mechanical components which have either a direct or indirect effect on overall safety can be increased in size and capacity more than proportionately to the increased vehicle size and weight. Engine output, or power, can be greatly increased to give performance characteristics more than consistent with those of today's high-speed expressway traffic.

If you build a wider bus you can also build it higher and still stay within present height limitations. From this engineer relationship between width and heights comes significant advantages. By adding 6 inches to the width, the height can be increased to 12 feet as compared with the 10 or 11 for the present vehicle and dual level buses.

Here are the major safety advantages:

1. Greater overall height directly contributes to safety because it allows placement of passenger seats at a height from the ground above the point at which most collision impacts take place. The driver's position is also raised, giving him better visibility and more safety in case of headon collision. Greater height reduces the accumulation of road splash and dirt on windshield and side windows in wet weather. The increased, overall width also reduces the tendency of the front wheels to throw road splash and dirt up on the side windows because the structure can extend further beyond the outside edges of the front wheels.

2. Even though the bus is higher, the extra width this permits a lower center of gravity which, in turn, improves resistance to overturning and sidesway.

3. Liberalized, and rear axle weight limitations permit more extensive use of stronger materials such as stainless steel which provides greater passenger protection and less structural weakness through corrosion.

4. The addition of over 6 inches in width in combination with the increased height make it possible to use much larger tires. The tire footprint, the area in contact with the road, is substantially larger by 46 percent, providing greatly improved road adhesion, better steering control, the greater skid resistance, and more effective braking. This also improves sidewise stability because it permits the use of a special rear suspension arrangement giving a lateral spacing between bellows of more than $2\frac{1}{2}$ times that possible with a conventional design. Wider spacing between dual wheel tires is also provided which gives cooler operation and which reduces the possibility of blowouts due to excessive heat buildup. Larger wheel diameter and width means greater brakeshoe area, that is 68.8 percent total greater effective brakeshoe area, and 28.6 percent brakeshoe area per ton of gross vehicle weight.

Wider brakedrums cut down on fading brake tendency. On passenger comfort, each pair of seats can be made 2 to 3 inches wider, that is from 38 to 40, or 41 inches wide. From my own personal experience I can testify that the additional width in the seats adds immeasurably to the comfort and convenience of an extended bus trip. By not using all of the additional 6-inch width in widening the seats, we can increase