

The additional height also permits larger side windows for improved passenger viewing.

Greyhound has spent \$2,000,000 engineering such a bus, which has been tested and has proved the advantages heretofore outlined. We thus know that the liberalization provided for in H.R. 14474 will add immeasurably to the safety and comfort of the bus-riding public, and are therefore hopeful of your favorable consideration. Coming at a time when the public is deeply concerned with highway safety, the intercity bus industry is ready, willing and able to contribute its part to the furtherance of the safety effort.

Attached to each copy of this statement is a printed sheet showing a detailed comparison between the specifications of the largest conventional type buses now being operated and the new one which Greyhound has engineered within the limits provided for in the bill here under consideration. While I believe the attached sheet is self-explanatory, I will be glad to make any further explanation you request.

Thank you.

SOME CONSIDERATIONS ABOUT SEATING FROM THE AMERICAN SEATING CO.,
GRAND RAPIDS, MICH.

There is considerable evidence to confirm the fact that people are demanding more sitting room for whatever seating requirements they have. It is particularly notable when considering auditorium and stadium chairs that the trend is toward wider more comfortable seats. The 17" & 18" seat that was used 20 or 25 years ago is obsolete and even the 19" seat is found only occasionally and then usually only because space requirement dictates the use of a few of these narrow sizes. Most auditoriums are concentrating on 20", 21", & 22" seats to give the public what is demanded. Obviously in an auditorium increasing the width of the seat decreases the capacity for a given area but the objections to narrow seats have been sufficient to overcome objections to the extra space required.

The reasons for the increased width of seats are, first, people are getting bigger and their bodies take up more space and, secondly, people are demanding more comfortable seating; the width of the seat is a major contributor to the comfort that can be built into the seat.

Considerable data has been collected and serves to prove the fact that both children and adults are getting bigger. In a pamphlet published by the United States Department of Agriculture entitled, "Heights and Weights of Adults in the United States", Home Economics Research Report No. 10, measurements have been tabulated of a number of groups showing this increase over the years. One of the interesting charts in this book shows the increase in height and weight of students entering Amherst and Yale Universities for many years. Throughout this research report many records prove the increase in weight which is, of course, a big factor in the comfort of the person seated. I have shown a chart of this collected data to accompany this report. One of the interesting figures shown is that in 20 years—from 1935 to 1957 the average student increased $\frac{3}{4}$ " in height and about 18 pounds in weight.

Another interesting publication bearing on this subject is "Weight, Height and Selected Body Dimensions of Adults in the United States—1960-1962. This is a publication by the Public Health Service No. 1000—Series 11—No. 8. In this study a nationwide probability sample 7,710 persons in the 18 to 79 age bracket was selected, and a vast amount of anthropometric data was tabulated. Interestingly enough they show seat breadth for men averaging 14" and a seat breadth for women averaging 14.4". This is one of the few body measurements in which women exceed men. Also they go on to point out that the increase in size to the middle age maximum is slightly greater in women than for men. However, seating cannot be designed for averages and to use average dimensions is misleading when considering adequate seat width.

In this same publication they show that to the 95 percentile men measure 16" in seat breadth and to the 99 percentile 17.4". For women in the same range—95 percentile 17.6" and the 99 percentile 19". The man reaches maximum seat breadth in the ages 25 to 34 whereas the woman attains this width somewhat later in life in the age brackets of 45 to 54. Since the usual seat in an inter-city bus measures approximately 34" between the two arms, it can readily be seen that two women in the upper ranges of these dimensions would be squeezed in quite tightly in such a seat. For example, to accommodate larger women the