Next add together the differences between \( T' \) and \( T \), between \( F' \) and \( F \), and between the weights of lumber per lineal foot. To the sum of these differences add the weight of snow or other special loading per lineal foot of bridge, and the dead load taken from the table. The final sum will be the dead load required.

To find the dead load for a bridge with sidewalks, look in the table of the class to which the bridge belongs, and find the weights for a bridge of the same span and roadway without sidewalks, then estimate the increments of these weights as follows:—

First, the weight of lumber per lineal foot on the sidewalks is to be calculated; and from it is to be subtracted twenty-four pounds, which is the weight per foot of the wooden hand rails, hub planks, and hand-rail posts (lumber not required when there are sidewalks). The difference will be the increment for the “lumber” column.

The increment for the “lateral system” column will be zero: that for the “floor system” column can be found approximately by the formula

\[ I = \frac{2bF}{3B}, \]

where \( I \) is the increment required, \( F \) the weight per foot of floor system taken from the table, \( b \) the sum of the widths of the sidewalks, and \( B \) the clear width of main roadway.

The increment of the “truss” column is found by assuming the dead load required, and calling it \( W_b \).

Let

\[ W_a = \text{the dead load given in the table}, \]
\[ P_a = \text{the live load per lineal foot on the main roadway}, \]
\[ P_b = \text{that on the sidewalks}; \]

then

\[ \frac{P_a + P_b + W_b}{P_a + W_a} = \text{the ratio of total loads}. \]

Let

\[ T_a = \text{the truss weight from the table}, \]
\[ T_b = \text{the new truss weight}; \]