

## Safety Score Stratification

The purpose of this scoring system would be to place road improvements and intersection improvements on equal footing when it comes to scoring projects for safety improvements. Ultimately this system removes the competition of roadways against intersections and ranks projects against those in their own category (i.e. roadways vs. roadways).

### Scoring System

The table below identifies the safety scores for projects based on the projects accident to volume ratio. This scale was developed through analysis of the average accident to volume ratio for over 100 potential projects. The safety rate would be calculated by using the equations below. The rate would then be input into the matrix to determine to project safety score.

### Safety Scoring Matrix

Score	Road	Intersection
20	> 10	> 2
18	9.01 - 10	1.81 - 2
16	8.01 - 9	1.61 - 1.8
14	7.01 - 8	1.41 - 1.6
12	6.01 - 7	1.21 - 1.4
10	5.01 - 6	1.01 - 1.2
8	4.01 - 5	0.81 - 1
6	3.01 - 4	0.61 - 0.8
4	2.01 - 3	0.41 - 0.6
2	1.01 - 2	0.21 - 0.4
0	0 - 1	0 - 0.2

$$\text{Road Safety Rate} = \left( \frac{\text{Average Annual Crashes}}{\text{Average Daily Traffic} \times 365} \right) \div \left( \frac{\text{Length of Road Improvement in Miles}}{1 \text{ Mile}} \right)$$

$$\text{Intersection Safety Rate} = \left( \frac{\text{Average Annual Crashes}}{\text{Average Daily Entering Vehicles} \times 365} \right)$$