## Preference Overview

Using this preference, you can control the level of disruption to staff during a schedule change and indeed use it in stages to move from the supplied schedule to a fully optimized schedule.

Optibus OnSchedule uses two criteria of similarity. The new schedule is similar to the previous one if either one of the following hold:

* Trip ID similarity: Consecutive trip IDs are substantially maintained
* Trip start time similarity: Trip start times are substantially maintained

The idea of "substantially" is implemented by applying a cost penalty for deviations from the original schedule. Thus, if you impose a low penalty, you are effectively saying, "I would like the new schedule to be similar, but similarity is less important than my other preferences ." In this case, The optimized schedule may be quite different from the original. If on the other hand, you impose a high penalty for deviations, you are effectively saying, "I would like the new schedule to be similar to the original, if necessary at the expense of my other preferences ." In this case, the optimized schedule may not look very different from the original.

To demonstrate the concept, we will use the fourth template below, Schedule Similarity - by trip id. It is the simplest to understand: It sets out to maintain Trip ID similarity. Its only parameter is the penalty. Here are results of setting increasing penalties as expressed by several KPIs: