# Default method as of 10/28/2019

1. Get cardinal angle of project
2. Select TMCs within 300ft of project
3. From selected TMCs
   1. Subselect TMCs whose cardinal angle within certain number of degrees of project segment (to eliminate cross street TMCs)—issue: cardinal angle for entire TMC can be significantly different from TMC portion by project, esp if TMC has big curve in it.
4. Make 90-ft buffer around those TMCs
5. For each direction (based on TMC signed direction field):
   1. Select those 90ft TMC buffers that intersect the project line
   2. Do intersect operation between 90ft TMC buffers and the project line, resulting in points where the project line intersects TMC buffers
   3. Split the project line at those intersection points into several lines.
      1. These lines are ‘pieces’ of the project line
   4. For each of these line pieces, do spatial join to whichever TMC’s buffer they fall into, based on centroid location
   5. Get distance weighted average speed-based values and total length of TMC intersection with project for that direction
6. Have dataframe with sum of length of each direction for project.
7. Winnow down to 2 directions actually on the project (assuming the project is a line)
   1. Select directions corresponding to longest and second-longest overlap distances (e.g. if N = 500, S = 450, E = 50, W = 55, then choose N and S as the two directions).
   2. If the greatest overlap still only overlaps <10% of entire project length, then say project has no data.

# Getting values for correct directions

## How to choose which TMCs are on-project vs. crossing project, if project IS on TMC network

E.g., if project is N-S project but has E-W TMCs crossing it, only return the data for the N-S TMCs.

If project > 2x buffer distance:

## How to return ‘no data’ for projects not on TMC network that have TMCs as cross streets.

E.g., N-S project that doesn’t have TMC data for roads it’s on, but crosses TMCs—how to make sure it doesn’t pick up those TMCs’ data, or accidentally pick up data from adjacent TMCs