Calculations

1. Develop Vehicle-Miles Traveled (VMT) utilizing average traffic volume for each weekday and weekend day hour between 6 a.m. and 8 p.m. in the year of analysis.
2. Obtain hourly speed data along INRIX Traffic Message Channels (TMC) for each day hour between 6 a.m. and 8 p.m. in the year of analysis.
3. Summarize occupancy results from NHTS vehicle occupancy travel surveys and calculate average vehicle occupancy.
4. Utilize the average vehicle occupancy to convert VMT to PMT.
5. Assemble roadway characteristics layer with posted speed limit.
6. **Threshold for Defining “Excessive Congestion”:** Roadway segments where average hourly travel speed is below 75 percent of the posted speed limit.
7. Sum *excessively congested PMT* in three weekday time periods: 6 a.m. - 10 a.m.; 10 a.m. - 4 p.m. and 4 p.m.-8 p.m., and one weekend daytime period: 6 a.m. - 8 p.m. for every 1 hour timestamp where speed is <75% of Posted Speed Limit
8. Sum *total PMT* in the three weekday time periods: 6 a.m. - 10 a.m.; 10 a.m. - 4 p.m. and 4 p.m.-8 p.m., and one weekend daytime period: 6 a.m. - 8 p.m. for every 1 hour timestamp.
9. Select the one of the three weekday time periods with the highest percentage of PMT in excessively congested conditions (Output X) and select the percentage of PMT in excessively congested conditions for the one weekend day period (Output Y)
10. Identify the share of PMT that occurs in excessively congested conditions by performing the following: [(Output X \* 5 weekdays) + (Output Y \* 2 weekend days)] / 7 days.
11. **Threshold for Need for Congestion Mitigation:** Roadway segments where the average weekday and weekend day share of person miles traveled in excessively congested conditions exceeds policy threshold of 2% are identified as those with Need for Congestion Mitigation