The City of Los Angeles is in the process of adopting project impact assessment methods based on vehicle miles traveled (VMT). The City aims to encourage reductions in greenhouse gas emissions, support multimodal transportation, and promote diverse infill development by reducing VMT.

Projects estimated to generate VMT exceeding the City’s thresholds of significance will be required to implement Transportation Demand Management (TDM) to reduce vehicle trips generated by the project, and thus, mitigate its impacts on the environment.

**Objective**

TDM effectiveness depends on a project site’s built environment and demographic context. Los Angeles comprises 469 square miles and is made up of diverse neighborhood typologies, from low density rural to high density urban communities. The City of Los Angeles developed a Travel Behavior Zone (TBZ) categorization method to help estimate the VMT and single-occupant vehicle trip reductions of TDM measures.

This poster describes data inputs and methods used to assign TBZ designations to U.S. Census Tracts within the City of Los Angeles.

**Methods**

- Built environment and demographic variables demonstrated to influence residents, employees, and visitors’ propensity to use transit were calculated for 1,003 U.S. Census Tracts within the City using ArcGIS software. See Table 1 for data definitions and sources.
- To compare each variable within the City, the z-score for each variable was calculated using the sample mean and standard deviation.
- Finally, a Travel Behavior Zone Index Value was calculated for each Census Tract using the z-score value of each factored variable and a function that assigns weights to the standard score (z-score) for each variable:

  \[
  \text{Travel Behavior Zone Index} = \left(0.25 \times z\text{-population density} \right) + \left(0.25 \times z\text{-daytime population density} \right) + \left(0.24 \times z\text{-land use diversity score} \right) + \left(0.23 \times z\text{-intersection density} \right) + \left(0.29 \times z\text{-distance to nearest fixed guideway station} \right) + \left(0.1 \times z\text{-distance to nearest major bus stop} \right)
  \]

**Results**

- The average Travel Behavior Zone (TBZ) Index value is 0.045 and values follow a somewhat normal distribution with a standard deviation of 0.827.
- Designations range from Zone 1, equivalent to a neighborhood context with low employment and population densities, homogenous land use mix, low intersection density, and underserved by transit service, to Zone 4, which describes an urban built environment with high population and employment densities, high street network connectivity, and access to transit.
- Areas where large employers own and/or occupied the majority of the land area with no residential population were manually assigned a Zone 4 designation because TDM can effectively influence commuter trips at campus-style contexts.

**Map of Travel Behavior Zones within the City of Los Angeles**

**References**


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