C2 Smart Data for Zimmerman

Source: Deliverable 4 “Resilient Multi-Modal Planning for Mitigation”

“Developing Secure Strategies for Vehicular Ad hoc Networks in Connected and Autonomous Vehicles,” from C2SMART, NYU Tandon School of Engineering, U.S. Department of Transportation http://c2smart.engineering.nyu.edu/2019/06/14/secure-strategies-

vehicular-ad-hoc-networks/

|  |  |  |
| --- | --- | --- |
| Trip Purpose | 2017 | 2009 |
| Total All Purposes (number) | 3,140 | 3,466 |
| Percentages |  |  |
| To/from Work | 17.4 | 15.6 |
| Work Related Business | 1.6 | 3.1 |
| Shopping | 18.5 | 20.9 |
| Other Family/Personal Errands | 20.0 | 21.6 |
| School/Church | 10.9 | 9.6 |
| Social and Recreational | 27.6 | 27.5 |
| Other | 4.1 | 1/8 |

**Table 1. Distribution of Trip Purpose Type Over Time, 2009 and 2017**

Source: [12] U.S. DOT, FHWA July 2018 Summary of Travel Trends: 2017 National Household Travel Survey, p. 18. https://nhts.ornl.gov/assets/2017\_nhts\_summary\_travel\_trends.pdf

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Mode (percentages) | | | |
|  | Private | Public Transit | Walk | Other |
| Trip purposes, 2017 |  |  |  |  |
| All purposes | 82.6 | 2.5 | 10.5 | 4.4 |
| To/from Work | 88.2 | 5.5 | 3.9 | 2.4 |
| Work Related Business | 80.1 | 3.4 | 8.4 | 8.0 |
| Shopping; Errands | 88.5 | 1.8 | 8.1 | 1.7 |
| School/Church | 70.5 | 2.5 | 10.3 | 16.7 |
| Social and Recreational | 77.1 | 1.6 | 18.1 | 3.3 |
| Other | 72.6 | 3.2 | 11.8 | 12.4 |

**Table 2. Existing distribution of transportation mode by trip purpose, U.S.**

Source: [12] U.S. DOT, FHWA July 2018 Summary of Travel Trends: 2017 National Household Travel Survey, p. 30-31. https://nhts.ornl.gov/assets/2017\_nhts\_summary\_travel\_trends.pdf.

Note: \*The percent indicates the “percent of person trips by mode of transportation and trip purpose (millions). Constructed from https://nhts.ornl.gov/assets/2017\_nhts\_summary\_travel\_trends.pdf

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Mode (percentages) | | | |
|  | Private | Public Transit | Walk | Other |
| Trip purposes, 2017 |  |  |  |  |
| All purposes | 82.6 | 2.5 | 10.5 | 4.4 |
| To/from Work | 88.2 | 5.5 | 3.9 | 2.4 |
| Work Related Business | 80.1 | 3.4 | 8.4 | 8.0 |
| Shopping; Errands | 95 | 2.5 | 2.5 | 0.0 |
| School/Church | 70.5 | 2.5 | 10.3 | 16.7 |
| Social and Recreational | 90.0 | 2.5 | 5.0 | 2.5 |
| Other | 72.6 | 3.2 | 11.8 | 12.4 |

**Table 3. Hypothetical distribution of transportation mode by trip purpose assuming CAV substitution, U.S.**