

MEMORANDUM

DATE: April 11, 2018

To: Zawwar Saiyed, PE

FROM: Ambarish Mukherjee, PE, AICP

SUBJECT: River Street Project Average Trip Length Calculation from Orange County Traffic Analysis Model (OCTAM).

LSA used the most recent OCTAM travel demand model in TransCAD (v 3.4.0.P) to prepare the trip length analysis. LSA developed a zone split and conducted a project specific select zone run to isolate and determine project trip distribution on the model roadway network. The following tasks were accomplished to develop the project’s average trip length:

Task 1: A separate traffic analysis zone (TAZ) was created for the project and project’s socio-economic data (SED) was assigned in that TAZ.

Task2: A select zone model run was conducted for the project TAZ.

Task 3: Daily select zone/project traffic volumes on the network were multiplied with the corresponding network segment lengths. The summation of these values provided the total vehicle miles traveled (VMT) on the roadway network created by the project.

$$\text{Select zone VMT} = \sum^{\text{all links}} (\text{project trips}) * (\text{network segment length})$$

Task 4: The daily volumes on the project TAZ’s centroid connectors were added up to calculate daily total project trips.

Task 5: The average project trip length was calculated by dividing the total VMT by the total project trips.

$$\text{Average project trip length} = (\text{Select zone VMT}) / (\text{Total Project Trips})$$

Based on the above methodology, the average project trip length was calculated to be **5.38 miles**.