



MEMORANDUM

TO: Heidi Vonblum, City of San Diego
FROM: Stephen Cook, PE, Chen Ryan Associates
DATE: April 19, 2020
RE: Effects of VMT Reducing Infrastructure in Mobility Zone 4 vs Mobility Zone 3.

The purpose of this Technical Memorandum is to document the difference in effectiveness for vehicle miles traveled (VMT) reducing infrastructure, within the City of San Diego, when comparing Mobility Zones 4 and 3.

Mobility Zones

As noted in the Mobility Choice Regulations Ordinance (Division 11), Mobility Zones shall be defined as follows:

1. Mobility Zone 1 means the Downtown Community Planning Area.
2. Mobility Zone 2 means any parcel that falls wholly or partially within an area defined as a transit priority area.
3. Mobility Zone 3 means a community planning area boundary with a VMT efficiency that is at 85 percent or less of the regional average for either resident VMT per capita or employee VMT per employee, as determined by the City Manager.
4. Mobility Zone 4 means any area not located within Mobility Zone 1, 2, or 3.

Background

The Active Transportation In-Lieu Fee Program will generally only apply to the Mobility Zone 4 areas, since these will be the areas that generate an average VMT above SB-743 standards. Per the City's Draft Transportation Impact Significance Thresholds, discretionary development projects within these areas will need to reduce their project related VMT to 15% below the regional average through the use of VMT-reducing strategies. However, the enforcement of TDM strategies at the project level is difficult; therefore, through this effort, the City plans to only require VMT reduction measures through infrastructure projects for which the quantification of the VMT reductions can be calculated, but do not need to be regularly monitored to ensure that they are being properly administered.

Rather than investing VMT reducing infrastructure in Mobility Zone 4, where VMT reduction potential is limited, the Active Transportation In-Lieu Fee Program would allow such development to pay a fair-share contribution to mitigate their transportation related impacts, based on the cost to reduce a mile of VMT within the City. The purpose of this fee is to 1) invest in active transportation and transit infrastructure within Mobility Zones 1, 2 & 3 where VMT reduction potential is highest, and 2) allow development within Mobility Zone 4 to more efficiently mitigate VMT impacts.

Value of Constructing Infrastructure in Mobility Zone 3 Instead of Mobility Zone 4

To better understand the value that is associated with constructing VMT reducing infrastructure in the more VMT efficient areas (Mobility Zone 3¹) as opposed to the less efficient areas (Mobility Zone 4) an analysis was performed for three communities located within Mobility Zone 4 (Sabre Springs, Carmel Mountain Ranch, and Scripps Ranch), which identifies the length of multi-modal facilities that would need to be constructed to equal the VMT reductions for the same facilities if they were built in a community located in Mobility Zone 3 (Example Community: North Park). **Table 1** below summarizes the results of this analysis. A more detailed table, and associated analysis worksheets are provided in **Attachment 1**.

Table 1 - Cost to Reduce One Mile of VMT - Mobility Zone 3 vs Mobility Zone 4

Community	Mobility Zone	VMT Reducing Infrastructure Type	Project	VMT Reduced	Cost / RVMT	Increase in Cost/RVMT Ratio vs. North Park
North Park	3	Bike Network	+11.6 miles of bicycle facilities	3,718	\$200	-
		Pedestrian Network	+14 miles of sidewalks	5,843	\$300	-
		Transit Shuttle	Shuttle	159	\$2,200	-
Sabre Springs	4	Bike Network	+525 miles of bicycle facilities	2,163	\$7,800	39-to-1
		Pedestrian Network	+14 miles of sidewalks	4,325	\$400	1.3-to-1
		Transit Shuttle	Shuttle	62	\$7,300	3.3-to-1
Carmel Mountain Ranch	4	Bike Network	+125 miles of bicycle facilities	3,557	\$1,200	6-to-1
		Pedestrian Network	+14 miles of sidewalks	7,115	\$300	N/A
		Transit Shuttle	Shuttle	102	\$5,300	2.4-to-1
Scripps Ranch	4	Bike Network	+300 miles of bicycle facilities	3,426	\$2,900	14.5-to-1
		Pedestrian Network	+14 miles of sidewalks	6,853	\$300	No Effect
		Transit Shuttle	Shuttle	98	\$5,800	2.6-to-1
Average Ratio Increase for Bike Network						20-to-1
Average Ratio Increase for Pedestrian Network						1.3-to-1
Average Ratio Increase for Transit Shuttle						2.8-to-1

¹ A Mobility Zone 3 community (North Park) was chosen as the example to compare Mobility Zone 4 communities against, since the Downtown Community (Mobility Zone 1) would be too extreme of a comparison due to its high VMT reducing efficiency, and Mobility Zone 2 (Transit Priority Areas) is made up of smaller areas located across several communities (which span across all three other Mobility Zones) and therefore would not be appropriate to compare a communitywide analysis against.

Key Findings

As shown in Table 1, the cost is significantly higher to reduce VMT within Mobility Zone 4, as compared to Mobility Zone 3, particularly for bicycle facilities (a 20 to 1 ratio). In fact, mitigation through the implementation of bicycle facilities would not be feasible for most Mobility Zone 4 communities, as the length of facilities that would be needed (125 miles to 525 miles) would be far greater than the transportation network within that community could support.

Additionally, if you were to allocate the average cost to reduce one mile of travel within Mobility Zone 4, by mode, using the mode split ratios that are assumed in the City's Climate Action Plan (7% pedestrian, 18% bicycle and 25% transit), as was done to determine the Fee for the in the Active Transportation In-Lieu Fee Program nexus, the cost to reduce one mile of vehicular travel in Mobility Zone 4 would be around \$4,500. This is more than three times the cost for the same reductions that were calculated within the VMT efficient areas, which is \$1,400 to reduce one mile of vehicular travel. Therefore, allowing development within Mobility Zone 4 to mitigate their VMT related impacts through the Active Transportation In-Lieu Fee program would potentially reduce their VMT mitigation costs by over a third.