CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: August 28, 2022

TO: Kevin Kent, TK Management Services, LLC

FROM: Ambarish Mukherjee, P.E., AICP

SUBJECT: TTM No. 38151 Madone Collections (MA 21143) Trip Generation and Vehicle Miles Traveled Analysis (LSA Project No. TKM2101)

LSA is under contract to prepare a Trip Generation and Vehicle Miles Traveled (VMT) Analysis Memorandum for the TTM No. 38151 Madone Collections (MA 21143) (project) located at Tentative Tract Map (TTM) 38151 in the City of Jurupa Valley (City). The proposed project consists of 36 single-family residential units. Figure 1 (all figures and tables attached) illustrates the regional and project location. Figure 2 illustrates the conceptual site plan for the project.

The purpose of this memorandum is to determine whether a Focused Transportation Assessment (FTA) or Traffic Impact Analysis (TIA) will be required for the proposed project. Additionally, this analysis conducts a project VMT analysis to determine whether the project will have a significant transportation impact under the California Environmental Quality Act (CEQA).

PROJECT TRIP GENERATION

This memorandum has been prepared consistent with the *City of Jurupa Valley Traffic Impact Analysis Guidelines – Methodologies and Requirements for General Plan Compliance Analysis and CEQA VMT Analysis*, dated November 2020 (TIA Guidelines). The City's TIA Guidelines states that land uses generating between 50 and 100 peak hour trips will need to prepare a FTA while projects generating greater than 100 peak hour trips will need to prepare a TIA.

The trip generation for the proposed project was determined using rates from the Institute of facility was determined using rates from the Institute of Transportation Engineers *Trip Generation Manual* (10th Edition) for Land Use 210 – "Single-Family Detached Housing." Table A summarizes the trip generation for the proposed project. As summarized in Table A, the project will generate 27 trips during the a.m. peak hour, 35 trips during the p.m. peak hour, and 340 daily trips. Since the project will generate less than 50 peak hour trips, a FTA or TIA may not be required for the project as per the City's TIA Guidelines.

PROJECT VEHICLE MILES TRAVELED ANALYSIS

On December 28, 2018, the California Office of Administrative Law cleared the revised California Environmental Quality Act (CEQA) guidelines for use. Among the changes to the guidelines was removal of vehicle delay and level of service from consideration under CEQA. The City adopted its

1500 Iowa Avenue, Suite 200, Riverside, California 92507 951.781.9310 www.lsa.net

TIA Guidelines that established the methodology for preparing VMT analysis for projects within its jurisdiction.

Methodology

The first step for preparing a VMT analysis is to evaluate whether a project is eligible to be screened out from preparing a detailed VMT analysis. The City's TIA Guidelines provides multiple screening criteria for land use projects. The project screening criteria established in the "Project Screening" section of the City's TIA Guidelines were reviewed to check if the project could be screened out from a detailed VMT analysis. Following is a brief description of project screening criteria that are applicable to this project and whether the project would be eligible to be screened out:

- **Transit Priority Area (TPA) Screening:** Based on the City's TIA Guidelines, projects located within a TPA may be presumed to have a less than significant impact absent substantial evidence to the contrary, and could be screened out. The project is located at the southwest corner of Camino Real and Jurupa Road. The project location was examined within the Western Riverside Council of Governments (WRCOG) screening tool, to determine whether the project is located within a TPA. Since the project is not located within a TPA, this screening criteria does not apply to the project.
- **Low VMT Area Screening:** As suggested in the TIA Guidelines, residential and office projects located in a low-VMT zone may be presumed to have a less than significant impact absent substantial evidence to the contrary, and could be screened out from a detailed VMT analysis. As recommended in the TIA Guidelines, the project location was further examined within the WRCOG screening tool. Based on the review, the project is not located within a low VMT area. Therefore, this screening criteria does not apply to the project.
- **Project Type Screening:** The TIA Guidelines recommends that projects generating less than 250 daily trips may be presumed to have a less than significant VMT impact, and could be screened out. However, as summarized in Table A, the project is estimated to generate 340 daily trips, and therefore, does not satisfy this screening criteria.

As shown above, the project could not be screened out of VMT analysis. As such, pursuant to the TIA Guidelines, a detailed VMT analysis was conducted to assess the project's VMT impact.

Thresholds of Significance

For residential projects, the TIA Guidelines recommends using City's base and cumulative year average VMT per capita as the VMT impact thresholds for the corresponding year. Since a numerical value needs to be established for these thresholds, these values were estimated from the most updated travel demand model used in the region. WRCOG has recently developed the Riverside County Model (RIVCOM), replacing the Riverside County Traffic Analysis Model (RIVTAM). Therefore, RIVCOM was used to estimate these thresholds. The base and cumulative year citywide VMT per capita values were calculated using the base year (2018) and cumulative year (2045) RIVCOM no project model runs.

The project VMT was also estimated using RIVCOM with project model runs for both base and cumulative years. For with project scenarios, RIVCOM socioeconomic database for both base and cumulative years were updated with the project land uses to calculate project VMT. The project VMT was calculated from the RIVCOM model runs as described below:

Project Traffic Analysis Zone (TAZ) Update

For base year scenario, a nearby empty zone was moved to the project location and used as the project TAZ. The project land use was added to the project TAZ so that the project could be isolated for VMT evaluation.

A similar approach was used for cumulative year. It should be noted that the project land use was included in the model as an additional land use and no shifting of land use/socioeconomic data from the parent TAZ was applied. Therefore, the cumulative VMT analysis can be considered as a conservative estimate.

Model Runs and Project VMT Estimation

Model runs were conducted for this updated with project model after incorporating the project land uses as described above. Project VMT per capita was estimated from RIVCOM model runs consistent with the methodology recommended in the City's TIA Guidelines. As such, Production-Attraction (P-A) method was used for project VMT estimate as recommended in the TIA Guidelines. Project-generated VMT was extracted from RIVCOM model runs using production-attraction trip matrices and by multiplying them with the final assignment skim matrices. The extracted project homebased VMT was divided by the estimated project population to develop the project VMT per capita for both scenarios.

VMT Analysis

Project VMT Impact

Table A summarizes the base year citywide average/significant threshold and project VMT per capita. As shown in Table A, the project's VMT per capita is greater by 28.31% compared to the City's average VMT per capita. Therefore, based on the TIA Guidelines, the project will have a significant VMT impact.

Detailed VMT calculation for the project is included in Appendix A.

Table A: Base Year Citywide and Project VMT per Capita

City*	Project	Difference	Percentage Difference	Significant Impact
21.9	28.1	6.2	28.31%	Yes

* *Estimated using "No project" RIVCOM base year (2018) model runs*

Table B summarizes the citywide average/significant threshold and the project VMT per capita for the cumulative year. As shown in Table B, the project's cumulative year VMT per capita is greater by 23.55% compared to the City's average VMT per capita. Additionally, the project is not consistent with the City's General Plan, and therefore, is not consistent with the Regional Transportation

Plan/Sustainable Communities Strategy (RTP/SCS). Therefore, as stated in the TIA Guidelines, the cumulative impact is considered significant.

Detailed VMT calculation for the project is included in Appendix A.

Table B: Cumulative Year Citywide and Project VMT per Capita

City*	Project	Difference	Percentage Difference	Cumulative Impact
22.5	27.8	5.3	23.55%	Yes

* *Source - Estimated using "No project" RIVCOM cumulative year (2045) model runs*

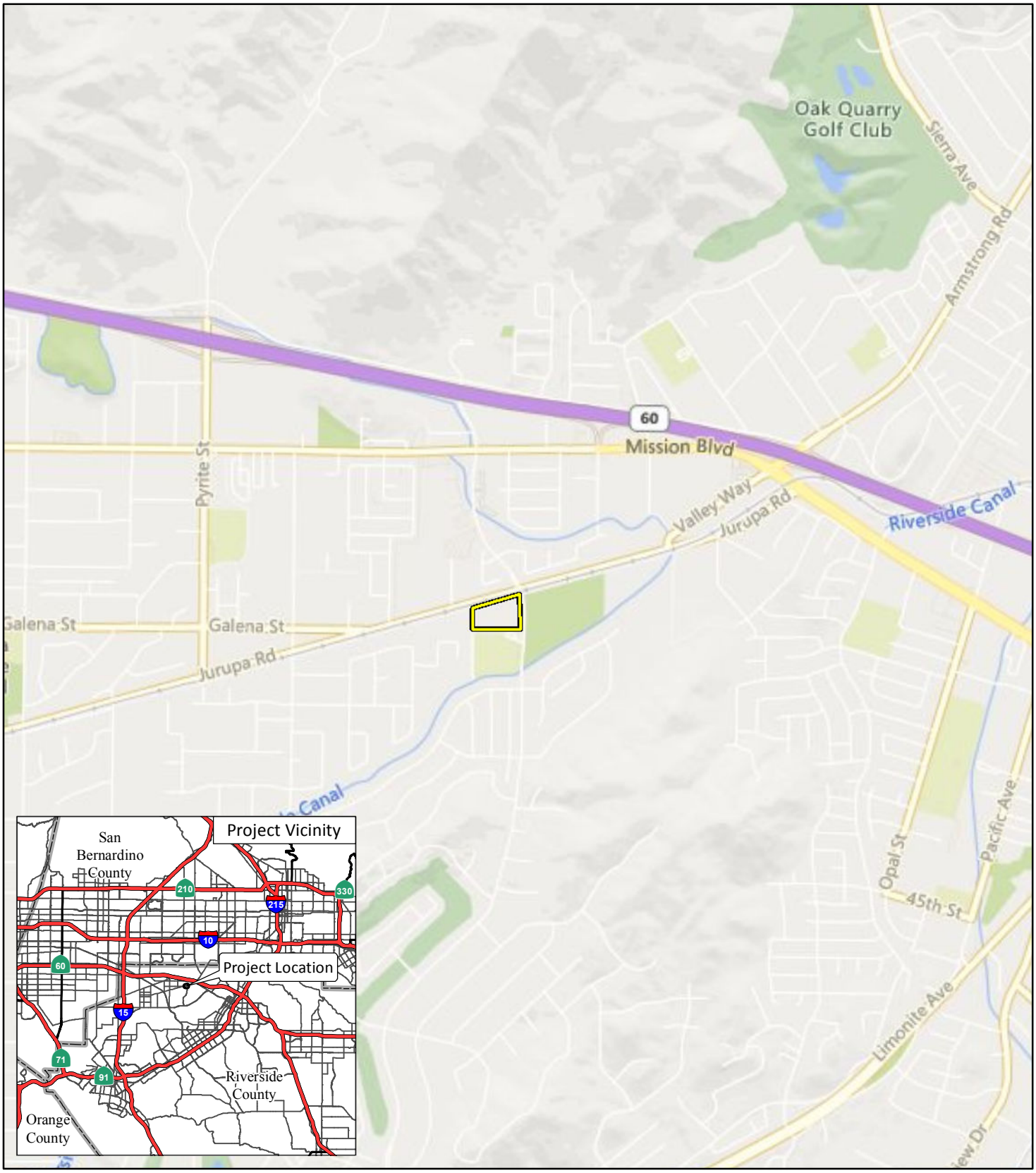
Mitigation

When a lead agency identifies a significant CEQA impact, the agency must identify feasible mitigation measures in order to avoid or substantially reduce that impact. VMT impacts will require mitigation of regional impacts through more behavioral changes. Enforcement of mitigation measures will be subject to the mitigation monitoring requirements of CEQA, as well as the regular police powers of the agency. These measures can also be incorporated as a part of plans, policies, regulations, or project designs. In general, transportation demand management (TDM) actions, active transportation amenities, and other measures to reduce the number of project trips are possible VMT mitigation strategies.

As aforementioned, the project is expected to have a significant impact based on the VMT analysis. To address that impact an agreed upon VMT mitigation plan will be developed between the applicant and the city to mitigate the projected impact.

Attachments:

Figure 1: Regional and Project Location
Figure 2: Conceptual Site Plan
Table A: Project Trip Generation
Appendix A: Project VMT Calculation



LSA

LEGEND

Project Location

FIGURE 1

N

0 1000 2000

FEET

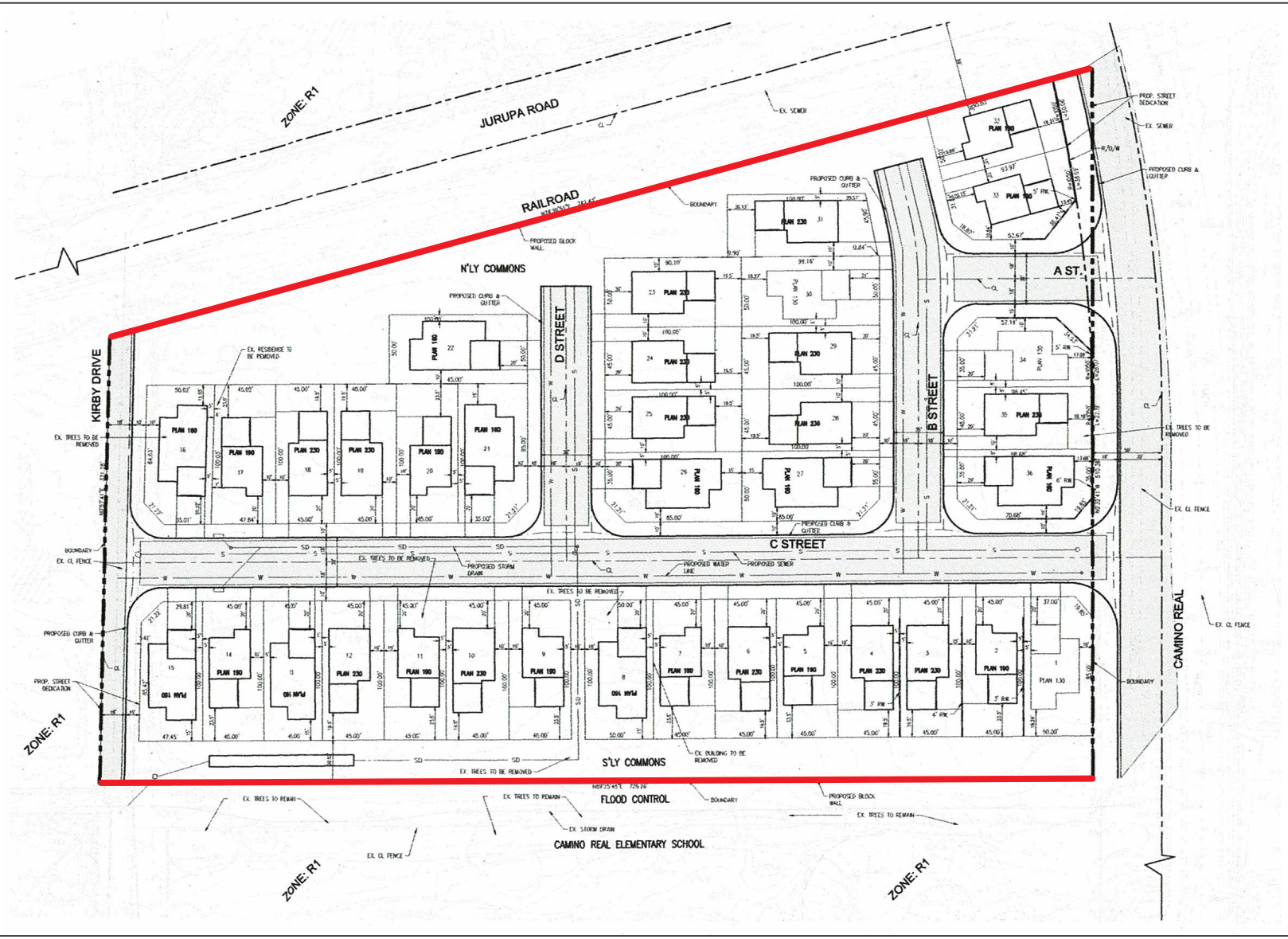
SOURCE: Bing (2020)

I:\TKM2101\GIS\MXD\Noise\ProjectLocation_Noise.mxd (9/16/2021)

TTM No. 38151 Madone Collections

Trip Generation and VMT Memorandum

Regional and Project Location



LSA

LEGEND

Proposed Block Wall

FIGURE 2

N

0 20 40

FEET

SOURCE: Encompass Associates

I:\TKM2101\G\Site Plan.ai (9/16/2021)

TTM No. 38151 Madone Collections

Site Plan

LSA

Table A - Project Trip Generation

Land Use	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
Single Family Residential	36 DU							
Trips/Unit[1]		0.19	0.56	0.74	0.62	0.37	0.99	9.44
Trip Generation		7	20	27	22	13	35	340
	Gross New Trips	**7**	**20**	**27**	**22**	**13**	**35**	**340**

Notes:

DU = Dwelling Unit

[1] Rates based on Land Use 210 - "Single-Family Detached Housing" from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* , 10th Edition, Setting/Location - "General Urban/Suburban."

LSA

Appendix A

VMT Calculation Worksheet - Project VMT

2018	Madone Collection (Project)	City of Jurupa Valley[1]
Population	102	106,073
Households	36	
Employment		27,636
Service population	102	133,709
Homebased (HB) VMT	2,866	2,319,118
OD auto VMT	4,042	5,140,658
Total OD VMT (auto + truck)	4,253	5,446,080
HB VMT per capita	28.1	21.9

1 *Obtained from RIVCOM base year no project model run*

2045	Madone Collection (Project)	City of Jurupa Valley[2]
Population	102	116,783
Households	36	
Employment		31,890
Service population	102	148,673
Homebased (HB) VMT	2,834	2,624,864
OD auto VMT	3,940	5,718,900
Total OD VMT (auto + truck)	4,123	5,982,420
HB VMT per capita	27.8	22.5

2 *Obtained from RIVCOM cumulative year no project model run*

LSA

Appendix A

VMT Calculation Worksheet - Project's Effect on VMT

2018	With project	Without project	Difference	% Difference
Roadway VMT	3,951,035	3,951,864	(828)	0.0%
Service population	133,811	133,709	102	0.1%
VMT per service population	29.5	29.6	0.1	0.3%

2045	With project	Without project	Difference	% Difference
Roadway VMT	5,064,504	5,057,975	6,529	0.1%
Service population	148,775	148,673	102	0.1%
VMT per service population	34.0	34.0	0.0	0.0%