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SUBJECT: **STUDY SESSION ON POTENTIAL STRATEGIES RELATED TO VEHICLE MILES TRAVELED (VMT) AND THE ENERGY AND CONSERVATION ACTION STRATEGY (ECAS)**

RECOMMENDED ACTIONS: **RECEIVE INFORMATION AND PROVIDE INPUT ON POTENTIAL VEHICLE MILES TRAVELED AND ECAS STRATEGIES**

BACKGROUND

Staff and the consultants presented information on the ECAS at the January 5, 2021 Planning Commission meeting. The ensuing discussion also included the topic of VMT, and Senate Bill 743. During that hearing, Commissioners engaged in a healthy discussion around these topics, which led to the need for this supplemental presentation, which will be made by John Gard of Fehr & Peers Transportation Consultants. This presentation will be both technical in nature, answering many of the unanswered questions from the prior study session, and also process-oriented, describing how separate VMT and Level of Service (LOS) policies will continue to be applied when land development proposals are reviewed.

This presentation will consist of three main parts. The first part will provide more background about VMT and the City's travel demand model. The second part will provide more information about Transportation Demand Management (TDM) strategies and their effectiveness in reducing VMT. The third part will describe how the General Plan Update and the Draft Supplemental Environmental Impact Report (DSEIR) will implement State policies for reducing VMT and Greenhouse Gas Emissions (GHG), and how the project will facilitate the community's General Plan and land development review process.

HISTORY

August 2015: Vacaville City Council adopted the Environmental Impact Report for the General Plan Update and Energy and Conservation Action Strategy, and approved the new General Plan and Energy and Conservation Action Strategy documents. The General Plan set the community's long-term vision for growth, economic development, and conservation of the natural environment.

July 1, 2020: Senate Bill (SB) 743 went into effect. This bill required the California Office of Planning and Research to revise the California Environmental Quality Act (CEQA) Guidelines to revise analysis of traffic impacts by removing the Level of Service metric and replacing it with Vehicle Miles Traveled.

The City's General Plan EIR used the Level of Service method for evaluating traffic impacts of the new General Plan.

October 20, 2020: To address these changes to State planning law, the City initiated an amendment to the Transportation Element of the General Plan and to the ECAS. The amendments would establish policies for evaluating projects based on their effect on VMT and would incorporate strategies to help new development reduce impacts to GHG emissions. The Planning Commission held a scoping hearing for the SEIR during the Notice of Preparation comment period of September 28, 2020 to October 28, 2020. The SEIR will analyze the environmental effects of the proposed General Plan Amendment to the Transportation Element to create and incorporate the new Vehicle Miles Traveled policies and actions, and of the update to the ECAS to include additional measures to reduce GHG. Planning Commission made and received comments on the scope for staff to consider during the analysis of the amendments.

January 5, 2021: Staff presented information related to the ECAS, its importance and purpose in reducing greenhouse gases, and how strategies can be created for the City and development in an effort to reduce greenhouse gases consistent with state law. The information also included how the ECAS related to VMT.

DISCUSSION

Vehicle Miles Traveled

Staff and the consultants will present potential VMT reduction actions and strategies for reducing impacts from new development. Part of these policies will determine the VMT thresholds of significance used in environmental studies reviewed by the Planning Commission (thresholds refer to a level of impact above which a project is considered to cause a significant impact to the environment). The strategies would be intended to provide a pathway to allow approval for projects that are consistent with the 2015 General Plan

The General Plan will also continue to use the Level of Service (LOS) metric to measure intersection congestion, since this is an important planning issue for new growth. Staff and the consultants will discuss how VMT and LOS impacts may likely interface and will discuss how some other jurisdictions are doing evaluating these issues. However, per state law, VMT will be the only metric relied on for measuring environmental impacts in CEQA analysis.

Attachment 1 presents the City's SB 743 Implementation Plan. It describes the purpose of the law, changes in CEQA section language, VMT thresholds, significance criteria, and potential mitigation measures for significant VMT impacts.

Attachment 2 presents screening maps for the most common land use types in the City. These maps may be used by staff to identify areas within the City that are "low VMT generating". As will be discussed during the presentation on January 19th, screening maps afford the City the opportunity to conclude that certain land uses proposed in VMT-efficient areas of the City may cause less-than-significant VMT impacts.

Public Works staff and the VMT consultant – Fehr & Peers, held a lengthy meeting with Discovery Builders on January 12, 2021 for a detailed and technical discussion about the specifics of the City's traffic model and guidelines. Questions related to how the model was calibrated for VMT, how VMT is calculated, and thresholds of significance for land use projects and potential mitigations.

Energy and Conservation Action Strategy (ECAS) and Travel Demand Management (TDM)

Additionally, staff will present potential ECAS polices and strategies for reducing greenhouse gas emissions generated by and in the city. Staff seeks comments and input on the direction of the actions and strategies.

Supplemental Environmental Impact Report

The project results in amending the 2015 General Plan and ECAS. Both the General Plan and ECAS were certified through an Environmental Impact Report with statements and findings of overriding consideration for impacts that could potentially be significant and unavoidable. In amending the General Plan and updating the ECAS, an updated environmental analysis must also be completed. For this project, a supplemental environmental impact report (SEIR) will focus on analysis of new potential environmental impacts caused by changes proposed to the Transportation Element related to VMT, and to any changes to the ECAS.

In doing a SEIR for VMT and the ECAS, environmental review of future development within Vacaville that is consistent with the General Plan may be able to rely on the original EIR and the SEIR instead of doing repetitive analysis for each individual project. This form of streamlining is encouraged by CEQA §15183.

The SEIR is anticipated to be released for the 45-day public review and comment period in mid-February. It is possible that the SEIR may identify significant and unavoidable impacts.

CONCLUSIONS & RECOMMENDATION

Staff anticipates the completion of the draft General Plan Amendment and ECAS Update and the public release of the SEIR by mid-February. Commission and community comments at this study session will assist the project team in preparing those draft plans. In addition, a study session on this topic is scheduled for the City Council meeting of January 26, 2021. Staff will return to the Planning Commission to hold a public comment hearing to receive public comments on the SEIR analysis during a 45-day public review period. Additional public notice will be provided prior to publication of the SEIR, consistent with CEQA.

No action is required at this meeting. Staff encourages Planning Commission to receive the information, and provide input regarding the possible strategies and actions and on the general direction of the proposed amendments to the Energy and Conservation Action Strategy that incorporate VMT reduction strategies into the City's planning process.

Attachments:

Attachment 1 – Interim SB 743 Implementation Guidelines for City of Vacaville
Attachment 2 – City of Vacaville Screening Maps

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Attachment 1

Interim

SB 743 Implementation Guidelines for

City of Vacaville

October 2020

Prepared By:

FEHR PEERS

Prepared for:

City of Vacaville

I. INTRODUCTION

This report presents recommendations for implementing Senate Bill (SB) 743 in the City of Vacaville. This report, which has been written in plain English for non-technical persons, is organized into the following chapters:

- *Chapter I (Introduction)* – describes background information on SB 743, relevant CEQA Guidelines, and a simple definition of Vehicle Miles of Travel (VMT).
- *Chapter II (VMT Calculations)* – presents VMT calculations by land use type using the City of Vacaville base year and cumulative year travel demand models.
- *Chapter III (Proposed VMT Thresholds of Significance for Land Use Projects)* – presents specific thresholds of significance the City may consider using when evaluating land use projects under CEQA including project types that are presumed to be less-than-significant.
- *Chapter IV (Proposed VMT Thresholds of Significance for Roadway Projects)* – presents specific thresholds of significance the City may consider using when evaluating roadway projects under CEQA including project types that are presumed to be less-than-significant.
- *Chapter V (Mitigation Measures and Updates)* – discusses mitigation measure opportunities to offset the significance of significant land use or roadway project transportation impacts, and updates to the significance criteria and VMT thresholds.

Background

On September 27, 2013, Governor Jerry Brown signed SB 743 into law and started a process intended to fundamentally change transportation impact analysis as part of CEQA compliance. These changes include elimination of *auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion* as a basis for determining significant impacts. The law directed the Governor's Office of Planning and Research (OPR) to update the CEQA Guidelines to include new criteria (e.g., metrics) for determining the significance of transportation impacts.

OPR selected VMT as the transportation impact metric, recommended its application statewide, and submitted updates to the CEQA Guidelines that were certified by the Natural Resources Agency in December 2018. The requirements of SB 743 became effective statewide on July 1, 2020.

To help aid lead agencies with SB 743 implementation, OPR produced the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018). The *Technical Advisory* helps lead agencies think about the variety of implementation questions they face with respect to shifting to a VMT metric. The guidance is not a recipe for SB 743 implementation since lead agencies must still make their own specific decisions about methodology, thresholds, and mitigation.

OPR hosted a series of webinars in Spring 2020, in which they provided verbal interpretations and clarifications of the Te*chnical Advisory*. Fehr & Peers regularly attends these webinars and notes these staff interpretations such that their latest guidance is reflected in reports such as this.

Intent of SB 743

The following two legislative intent statements are contained in the SB 743 statute:

1) Ensure that the environmental impacts of traffic, such as noise, air pollution, and safety concerns, continue to be properly addressed and mitigated through the CEQA.

2) More appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions.

These statements are important because they provide direction to OPR and to lead agencies. For OPR, the direction is largely about what the new metrics should achieve. For lead agencies, the direction is about expected changes in transportation analysis plus what factors to consider for significance thresholds.

SB 743 does not prevent a city or county from continuing to analyze delay or LOS as part of other plans (i.e. the general plan), fee programs, or on-going network monitoring, but these metrics will no form a determination of significant impacts under CEQA. Cities or counties can still use vehicle LOS outside of the CEQA process if they determine it is an important part of their transportation analysis process. The most common applications will likely occur for jurisdictions wanting to use vehicle LOS to size roadways in their general plan or determine nexus relationships for their impact fee programs. Jurisdictions can also continue to condition projects to build transportation improvements through the entitlement process (i.e., conditions of approval) in a variety of ways, such as using general plan policy consistency findings.

Relevant CEQA Guidelines

This section presents the precise language contained in the most recent CEQA guidelines pertaining to this topic.

CEQA Section 15064.3 (Determining the Significance of Transportation Impacts)

This section defines VMT as "the amount and distance of automobile travel attributable to a project". It describes certain conditions (e.g., proximity to a transit stop) for land use projects that should be presumed to cause a less than significant transportation impact. It concludes that projects that decrease VMT compared to existing conditions should be presumed to have a less than significant transportation impact.

> ***New*** **Section 15064.3. Determining the Significance of Transportation Impacts.**
>
> **(a) Purpose.**
>
> **This section describes specific considerations for evaluating a project's transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact.**
>
> **(b) Criteria for Analyzing Transportation Impacts.**
>
> **(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.**

CEQA SECTION 15064.3, PART 4

This section states that the lead agency has the discretion to choose the most appropriate methodology for evaluating a project's VMT.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

(c) Applicability.

The provisions of this section shall apply prospectively as described in section 15007. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide.

CEQA GUIDELINES SECTION 15064.7 (THRESHOLDS OF SIGNIFICANCE)

This section encourages public agencies to develop and publish thresholds of significance to be used in determining the significance of environmental effects. This report and its recommended significance thresholds, which are supported by substantial evidence, will ultimately be reviewed and adopted by the City of Vacaville City Council.

§ 15064.7. Thresholds of Significance.

(a) ~~**Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects.**~~ A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant.

(b) **Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects.** Thresholds of significance to be adopted for general use as part of the lead agency's environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence. **Lead agencies may also use thresholds on a case-by-case basis as provided in Section 15064(b)(2).**

Technical Advisory on Evaluating Transportation Impacts in CEQA

The 26-page *Technical Advisory* provides guidance for how professional planners and CEQA practitioners should approach SB 743 implementation including recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures.

Page 1 of the document states the following:

- The *Technical Advisory* does not alter lead agency discretion in preparing environmental documents subject to CEQA.
- The *Technical Advisory* should not be construed as legal advice.
- OPR is not enforcing or attempting to enforce any part of the recommendations.

Given the length, technical depth, and wide range of topics addressed in the *Technical Advisory*, it is not summarized here. However, it is cited frequently in the following chapters.

VMT 101

This subsection presents a high level overview of what VMT is and what it is not.

1. By definition, one (1) VMT is defined as one mile driven by a vehicle (regardless of the number of occupants).
2. VMT is commonly expressed as a daily value (in miles) for a typical weekday when schools are in session.
3. All VMT metrics presented in this report comprise all components of vehicle travel (i.e., all vehicle types and trip purposes). Consistent with the *Technical Advisory,* VMT estimates do not truncate trips at political or model boundaries. Chapter III discusses the VMT calculations in more detail.

While VMT is a useful metric for quantifying the efficiency of a given mix of land uses and roadway network enhancements, it is not a direct measure of congestion or delay.

The following link provides a brief instructional video further defining VMT: http://www.fehrandpeers.com/sb743/

II. VMT CALCULATIONS

This chapter presents the VMT calculations that were performed for the City of Vacaville using its base year and cumulative year travel demand model.

City of Vacaville Travel Demand Model

The City of Vacaville travel demand model has a base year of 2015 and a cumulative year corresponding to 2050. It is a traditional three-step (trip generation, distribution, assignment) model that covers the entire City. The roadways and freeways that provide access to the City (e.g., I-80, I-505, Peabody Road, etc.) are coded as external gateways.

Table 1 displays the land use totals within the City for primary land use types under the base and cumulative models. As shown in the table below, the City is anticipating a substantial increase in office and industrial land uses and moderate increases in single- and multi-family dwelling units, highway commercial, general retail, and warehouse land uses. The net result of this growth is a better match between jobs and housing.

Table 1 –
City of Vacaville Land Use Totals

	Base Year (2015)	Cumulative (2050)	
Land Use Type	**DU's or KSF**	**DU's or KSF**	**Percent Increase**
Single-Family Units	24,867	34,476	39%
Multi-Family Units	7,187	10,197	42%
Age-Restricted Units	2,707	2,790	3%
Office	928	3,165	240%
Highway Commercial	1,491	2,499	68%
General Retail	7,186	10,927	52%
Industrial	3,751	11,744	213%
Warehouse	4,385	6,346	45%
Students	15,648	23,147	48%

Note: Land use comparison limited to land uses within the City that are the primary trip generators.
Source: City of Vacaville travel demand model.

VMT Calculation Details

Prior to presenting any specific outputs from the model for land use projects, it is important for users to understand how VMT is being estimated and what the values represent. The following four points are particularly important for readers' comprehension of the VMT estimates:

1. **Residential VMT represents "home-based trip productions" only** – As the Vacaville model is a trip-based model, it is not possible to associate non-home-based (NHB) trips back to an individual household (though NHB trips are included in the model). Thus, all residential VMT is associated with trip productions at the home (e.g., to work, to shop, to school, to recreate, etc.). Additionally, the small proportion of home-based trips that are "attractions" (e.g., pizza delivery, UPS delivery, etc.) are excluded due to complexity of tracking this particular metric. Since the exclusion is applied for all residential uses and is linear in nature, it does not affect residential VMT efficiency.

2. **VMT estimates reflect the full length of trips that enter/exit the City** – some trips produced or attracted by land uses in Vacaville have trip origins or destinations outside the City (e.g., in Sacramento, Fairfield, Bay Area, etc.). The entire length of these trips is reflected in the VMT estimates by virtue of "appending external trip lengths" to those trips that have an origin/destination at a model gateway. For instance, a home-based-work trip by a Vacaville resident who works in Vallejo would generate perhaps three miles of travel within the Vacaville City limits and 20 miles of travel (one-way) outside of the City to reach Vallejo. Hence, the full length of the trip, 23 miles, would be captured in that household's VMT.

3. **VMT estimates reflect travel by all vehicle types** – The *Technical Advisory* frequently cites "automobile travel" versus trips made by all vehicle types. The automobile travel reference applied to activity based models, in which the number of tours made by all members of a household or office building employees can be tracked, thereby allowing deliveries and heavy vehicle trucks to be excluded. This is not possible with trip-based models. Therefore, the VMT estimates shown here represent all types of trips ranging from private vehicles, deliveries, and heavy vehicles.

4. **VMT efficiency is expressed on a "per dwelling unit" and "per KSF" by land use type basis** – During webinars in May 2020, OPR staff expressed a preference for using these types of metrics over others (which are cited in the *Technical Advisory*) such as 'per capita' and 'per service population'. The rationale for expressing transportation efficiency using these metrics is that it focuses on the relative efficiency of the placement of a given type of land use within a city. In contrast, the 'per capita' and 'per service population' metrics have been shown to create 'winners and losers' based on specific land use travel behavior, which may not be aligned with the intent of SB 743.

VMT Calculations

Table 2 displays the average VMT per dwelling unit and KSF for various land uses within the City of Vacaville from the base and cumulative year versions of the City of Vacaville travel demand model. The results in Table 2 make sense intuitively for base year conditions:

- The single-family average of 86 VMT per unit is heavily influenced by the 74 percent of Vacaville employed persons who commute to workplaces outside the City. Those long-distance commutes (i.e., over 30 miles one-way on average) are contributing to this VMT result.
- The average VMT per multi-family unit is about two-thirds of the single-family unit average VMT. This result is reasonable based on the same ratio of multi-family to single-family daily trips (i.e., 6.5 versus 9.5, a one-third reduction).
- Age-restricted units generate much lower levels of VMT than the other uses for two reasons. First, they generate fewer daily trips, and second, relatively few of those trips are for commute purposes.
- Highway commercial has greater VMT generation rates than standard retail due primarily to its greater daily trip generation rate and the nature of trips along I-80, which are often long distance.
- Industrial and warehouse have relatively low VMT per KSF based on the majority of their buildings being used for storage, manufacturing, etc.

Table 2 –
Average VMT per DU and KSF for Land Uses within the City of Vacaville [1]

Residential Uses			Non-Residential Uses		
	VMT Per Dwelling Unit			VMT Per KSF	
Use	Base Year (2015)	Cumulative (2050)	Use	Base Year (2015)	Cumulative (2050)
Single-Family Units	86.4	76.5	Office	90.8	83.5
Multi-Family Units	58.5	55.5	Highway Commercial	158.2	158
Age-Restricted Units	37.6	35	General Retail	121.5	125
			Industrial	34.6	28.4
			Warehouse	17.9	15.7

Notes:
[1] Derived from City of Vacaville travel demand model. Refer to previous pages for VMT calculation details.
[2] Source: Fehr & Peers, 2020.

Similarly, the cumulative year results are also reasonable as evidenced by the following:

- The VMT per single-family and multi-family dwelling unit values are lower in the cumulative year compared to the base year. These reductions are due to the increase in local employment opportunities that City is expecting in the 2050 scenario, which are shown in Table 1. Fewer residents will have to travel outside of the City to work.

The importance of producing consistent VMT estimates is described in the *Technical Advisory*, stating that "The agency should be consistent in its VMT measurement approach throughout the analysis to maintain an apples-to-apples comparison. For example, if the agency uses a home-based VMT for the threshold, it should also use home-based VMT for calculating project VMT and VMT reduction due to mitigation measures

III. PROPOSED VMT THRESHOLDS OF SIGNIFICANCE FOR LAND USE PROJECTS

This chapter presents the thresholds of significance pertaining to VMT that Vacaville will apply when analyzing the transportation impacts of land use projects under CEQA. Note that analyses of a land use project's impacts on bicycle/pedestrian facilities, transit, construction, emergency access, nonstandard design features, etc. are still permitted under SB 743.

Efficiency Threshold

Page 10 of the *Technical Advisory* states that OPR recommends that a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. Lacking any other information that would suggest a different threshold should be applied, the City of Vacaville has concluded that this threshold should be applied for land use projects in the City.

Project Screening

The *Technical Advisory* offers guidance regarding land use projects that are presumed to be less-than-significant. Here, five such project types are presented. Each project type is followed by an evaluation of its general reasonableness and defensibility under CEQA.

1. *Small Projects* – The *Technical Advisory* concludes that, absent any information to the contrary, projects that generate 110 trips per day or less may be assumed to cause a less-than-significant transportation impact. This level of trip generation equates to about 10,000 square feet of office space, 11 single-family dwelling units, or 17 multi-family dwelling units.
   Evaluation: This type of screening is generally reasonable, if not more stringent than many City Transportation Impact Study (TIS) Guidelines that typically do not even require studies unless projects generate 500 or more daily trips.

2. *Projects near Transit Stations* – projects located within ½ mile of an "existing major transit stop" or an "existing stop along a high quality transit corridor" would have a less-than-significant impact on VMT.
   Evaluation: This type of screening is also reasonable. Analysts will need to carefully determine whether the site-specific conditions meet the "major transit stop" and "high quality transit corridor" definitions. Additionally, there are specific conditions on projects that must also be met.

3. *Affordable Residential Development* – projects consisting of a high percentage of affordable housing may be assumed to cause a less-than-significant transportation impact on VMT because they may improve jobs-housing balance and/or otherwise generate less VMT than market-based units.

   Evaluation: While it is correct that affordable housing projects generate fewer trips per unit than market based units, they nonetheless would generate new VMT. At issue is whether these units should be considered as a separate land use similar to active-adult units, and then evaluated for their relative efficiency within the City (similar to how single-family and multi-family is being treated). When the City receives a development application for this type of use, a detailed evaluation of this topic should occur.

4. *Redevelopment Projects* – If a proposed redevelopment project leads to a net overall decrease in VMT (when compared against the VMT of the existing land uses), the project would lead to a less-than-significant transportation impact.

   Evaluation: This is a generally reasonable conclusion. However, in most instances, redevelopment occurs on sites that may not be operating at optimal levels (e.g., an underperforming mall or strip retail center). Hence, a question that must be answered pertains to whether the comparison should be based on the existing VMT of the site or VMT of the site if operating at full capacity. When the City receives an application to redevelop a large existing property, a detailed evaluation of this topic should occur.

5. *Local Serving Retail* – Trip lengths may be shortened and VMT reduced by adding "local-serving" retail opportunities that improve retail destination proximity. Page 17 of the *Technical Advisory* generally describes retail development including stores less than 50,000 square feet as locally-serving.

   Evaluation: This screening opportunity has generally been interpreted as applying to a retail center whose total building size does not exceed 50,000 square feet. When the City receives a development application for this type of retail use, a detailed evaluation of this project should occur for two reasons. First, a 50,000 square foot retail center would typically generate about 5,000 VMT, which is more than five times that allowed under the Small Projects definition above. Second, Page 16 of the *Technical Advisory* states that a net increase in total VMT caused by a retail project may indicate a significant transportation impact. If the hypothetical 50,000 square foot retail center had a project-generated VMT of 5,000, it is not clear whether an equivalent amount of VMT would be offset/reduced elsewhere in the City to result in no net increase in VMT.

Proposed VMT Thresholds of Significance – Residential Land Uses

For projects that do not qualify for any of the screening opportunities presented on the prior pages, the City of Vacaville will apply the following thresholds of significance when analyzing the VMT transportation impacts of residential land use projects under CEQA.

1. The project would cause a significant transportation impact if it would generate an average VMT per dwelling unit that is greater than 85 percent of the city-wide average for that land use type.
2. If the above threshold is exceeded, the project's VMT impact could still be found to be less-than-significant if it did not cause the total VMT generated by the City of Vacaville to increase.

The above calculations will be performed using the City's travel demand model for both base year and cumulative conditions. **Table 3** shows the specific thresholds for each residential land use type.

Table 3 –
Average VMT per DU Thresholds for Residential Land Uses within the City of Vacaville [1]

Use	Base Year (2015)		Cumulative (2050)	
	SB 743 VMT Threshold [2]	Average VMT Per Dwelling Unit	SB 743 VMT Threshold [2]	Average VMT Per Dwelling Unit
Single-Family Units	73.4	86.4	65.0	76.5
Multi-Family Units	49.7	58.5	47.2	55.5
Age-Restricted Units	32.0	37.6	29.8	35

Notes:
[1] Derived from City of Vacaville travel demand model. Refer to previous pages for VMT calculation details.
[2] Threshold applied here is 85 percent of the average for that land use type.
Source: Fehr & Peers, 2020.

Proposed VMT Thresholds of Significance – Non-Residential Land Uses

For projects that do not qualify for any of the screening opportunities presented on the prior pages, the City of Vacaville will apply the following thresholds of significance when analyzing the VMT transportation impacts of non-residential land use projects under CEQA.

1. The project would cause a significant transportation impact if it would generate an average VMT per KSF that is greater than 85 percent of the city-wide average for that land use type.
2. If the above threshold is exceeded, the project's VMT impact could still be found to be less-than-significant if it did not cause the total VMT generated by the City of Vacaville to increase.

The above calculations will be performed using the City's travel demand model for both base year and cumulative conditions. **Table 4** shows the specific thresholds for the most common non-residential land use types.

Table 4 –
Average VMT per KSF Thresholds for Non-Residential Land Uses within the City of Vacaville [1]

Use	Base Year (2015)		Cumulative (2050)	
	SB 743 VMT Threshold [2]	Average VMT Per KSF	SB 743 VMT Threshold [2]	Average VMT Per KSF
Office	77.2	90.8	70.975	83.5
Highway Commercial	134.5	158.2	134.3	158
General Retail	103.3	121.5	106.25	125
Industrial	29.4	34.6	24.1	28.4
Warehouse	15.2	17.9	13.3	15.7

Notes:
[1] Derived from City of Vacaville travel demand model. Refer to previous pages for VMT calculation details.
[2] Threshold applied here is 85 percent of the average for that land use type.
Source: Fehr & Peers, 2020.

Proposed VMT Thresholds of Significance – Atypical and Mixed-Use Projects

Special consideration will be necessary to analyze VMT impacts for land uses that do not fit into any of the above eight categories. Common examples are: hotels, medical centers, churches, schools/colleges, specialty retail uses, etc. These uses should be analyzed on a case-by-case basis using available information and applying the general intent of the *Technical Advisory*.

Additionally, projects that feature a mix of complementary land uses on-site should be analyzed using a technical approach geared toward the specifics of the project. The *Technical Advisory* describes two possible approaches: (1) analyze (considering internal trips) and determine significant impacts of each project component separately, or (2) consider significant impacts based on the project's dominant land use.

IV. PROPOSED VMT THRESHOLDS OF SIGNIFICANCE FOR TRANSPORTATION PROJECTS

This chapter provides an introductory discussion of how transportation projects should be evaluated under CEQA. Since this is a complex and evolving topic, only a high-level overview is provided at this point.

Technical Advisory Guidance on VMT Impacts from Transportation Projects

Pages 19- 28 of the Technical Advisory discuss a number of aspects of this topic. Following are some of the key recommendations from it:

1. *The "induced vehicle travel" caused by certain transportation projects must be quantified*. Projects that would likely lead to a "measurable and substantial" increase in vehicle travel (i.e., VMT) generally include: addition of through lanes on existing or new highways, including general purposes lanes, carpool lanes, auxiliary lanes, or lanes through grade-separated interchanges.
2. *A variety of transportation projects would not be expected to induce more vehicle travel*. The following page lists these project types, though it is noted that evidence is not provided to support that conclusion of no net VMT.
3. *A generally accepted interpretation of the Technical Advisory is that a transportation project that causes a net increase in VMT would be considered to have a significant impact*. Although a specific significance threshold is not provided in the *Technical Advisory*, it states on multiple occasions that transportation projects that do not generate additional VMT are presumed to have less-than-significant impacts. Part 2b of Section 15064.3 of the CEQA Guidelines (Determining the Significance of Transportation Impacts) states that "Transportation projects that reduce, or have no impact on VMT should be presumed to cause a less than significant transportation impact."
4. *VMT attributable to a project should represent the difference in VMT with and without the project across the full area in which driving patterns are expected to change.* VMT should be not truncated at model or jurisdictional boundaries.
5. *Mitigation for VMT impacts caused by transportation projects may include tolling new lanes, converting general purpose lanes to carpool/express lanes, funding/implementing travel demand management strategies, and implementing Intelligent Transportation Systems (ITS) strategies.*

Proposed VMT Threshold of Significance – Transportation Projects

The City of Vacaville will apply the following threshold of significance when analyzing the VMT transportation impacts of transportation projects under CEQA.

- A transportation project would cause a significant transportation impact if it would lead to induced travel and increased VMT.

- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Conversion of existing general purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Reduction in number of through lanes
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., HOV, HOT, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Installation of traffic metering systems, detection systems, cameras, changeable message signs and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow
- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase
- Initiation of new transit service
- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
- Removal or relocation of off-street or on-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
- Addition of traffic wayfinding signage
- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel
- Installation of publicly available alternative fuel/charging infrastructure
- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

Projects on Page 21 of the *Technical Advisory* that are presumed to not cause a significant transportation impact.

V. MITIGATION MEASURES AND PLAN UPDATES

This chapter provides an overview of potential mitigation measures to address significant VMT impacts. Additionally, it describes the extent to which this plan should be updated.

Overview of Mitigation Measure Strategies

Feasible mitigation measures will be recommended for land use projects that exceed the applicable VMT threshold and cause a significant impact. While an abundance of potential VMT reduction strategies exist, not all of these are applicable to suburban settings, and many have not undergone sufficient academic/technical review to demonstrate their effectiveness. In CEQA, it is important to demonstrate that any recommended mitigation measures are both feasible and effective.

Mitigation measures for VMT impacts will principally focus on modifying the project to generate less VMT, often through the implementation of transportation demand management (TDM) strategies. This is in contrast to pre-SB 743 environmental review efforts, in which significant transportation impacts were based on traffic operations and would be mitigated by typically adding roadway capacity at the impacted facilities. Since the latter solution would not reduce a project's VMT, off-site capacity-increasing improvements to address significant transportation improvements will no longer be recommended in CEQA documents (but may still be included as conditions of approval). The City's "Energy and Conservation Action Strategy" (ECAS), which pertains to City goals to reduce greenhouse gas emissions, should be also referenced for consistency when considering VMT reduction strategies and effectiveness.

Alternative approaches available to the City could include a VMT mitigation bank or impact fee program, in which a project pays a proportionate fee into the program that will fund certain improvements (e.g., bikeway projects, transit enhancements, etc.) within the City that would reduce VMT. However, these programs can be very complex, and time-intensive to establish and operate.

Like most travel demand models, the City's model is not sensitive to most policies and actions associated with TDM. For instance, it does not include a mode split component, does not consider the effects of the completeness of bicycle/pedestrian facilities on auto travel, doesn't account for parking pricing, and doesn't consider employer-sponsored TDM programs. For these reasons, it is unlikely that the City's model will be able to accurately estimate how a given set of mitigation measures will reduce VMT. However, several off-model analytical tools are available including:

- Customized VMT estimation tools have been built for a number of large jurisdictions in California including Los Angeles, San Jose, San Francisco, and a tool for the entire SANDAG (San Diego) region.

Although the applicability of those tools to Vacaville is not known, they could at least represent a starting point for analysis.

- Fehr & Peers, working in conjunction with researchers at UC Berkeley (for the ARB Zero Carbon Buildings Study) developed a spreadsheet-based tool known as TDM+ that estimates a percent reduction in VMT due to a single TDM strategy or combinations of strategies. TDM+ incorporates the effects of numerous land use and design strategies as well as various travel incentives and disincentives. TDM+ allows a user to select strategies whose reduction percentages are highly defensible and suitable for use in environmental analysis documents because they have been derived from academically prepared, peer-reviewed studies that would represent substantial evidence regarding the effectiveness of the given strategy.

Subsequent Updates to SB 743 Implementation Plan

This report should be periodically updated as necessary to reflect any of the following:

- Changes in planned/proposed land uses (both within and outside of Vacaville) that could have a substantial effect on VMT thresholds.
- Changes in the planned roadway system (both within and outside of Vacaville) that could have a substantial effect on VMT thresholds.
- Changes in state-of-the-practice or technical guidance from agencies with respect to how VMT should be calculated and/or VMT thresholds should be set.
- Changes in mobility options that could have a substantial effect on travel and VMT calculations.

The last bullet is particularly noteworthy because the City's travel demand model, like nearly all models, does not currently consider the effects of a variety of anticipated disruptions in transportation such as:

- Implementation of connected autonomous vehicles (AVs)
- Changes in travel to brick-and-mortar retail due to online shopping
- New mobility choices such as bikeshare, more widespread Transportation Network Company (TNC) saturation, and micro-mobility.

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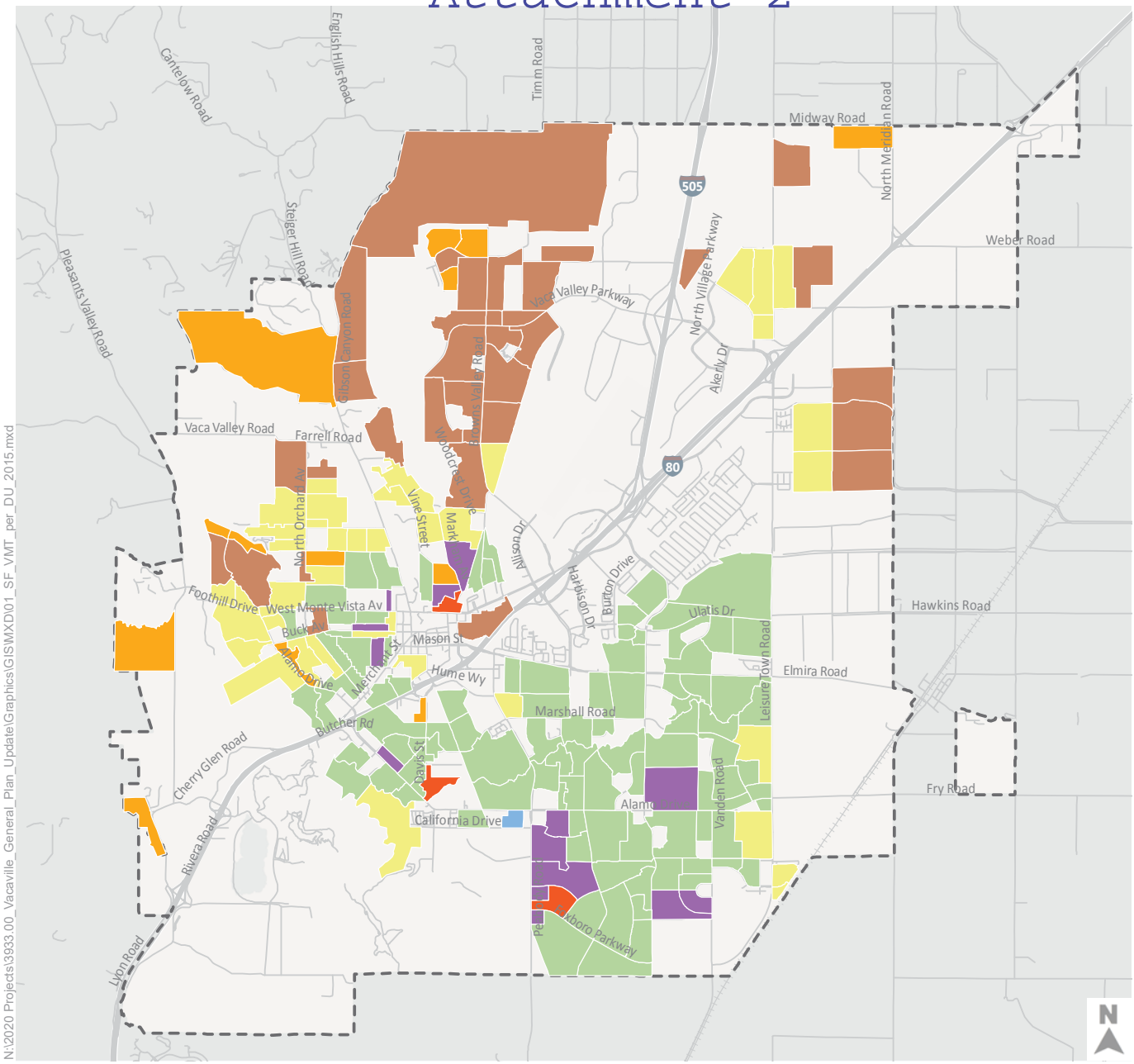

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Figure 1

% Difference from Citywide Average Home-based VMT per DU (86.40)

- ≤ - 15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Single Family DU

All Traffic Analysis Zones (TAZs) with at least 10 dwelling units are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

Home-based VMT per Single Family Dwelling Unit
Base Year (2015) Conditions

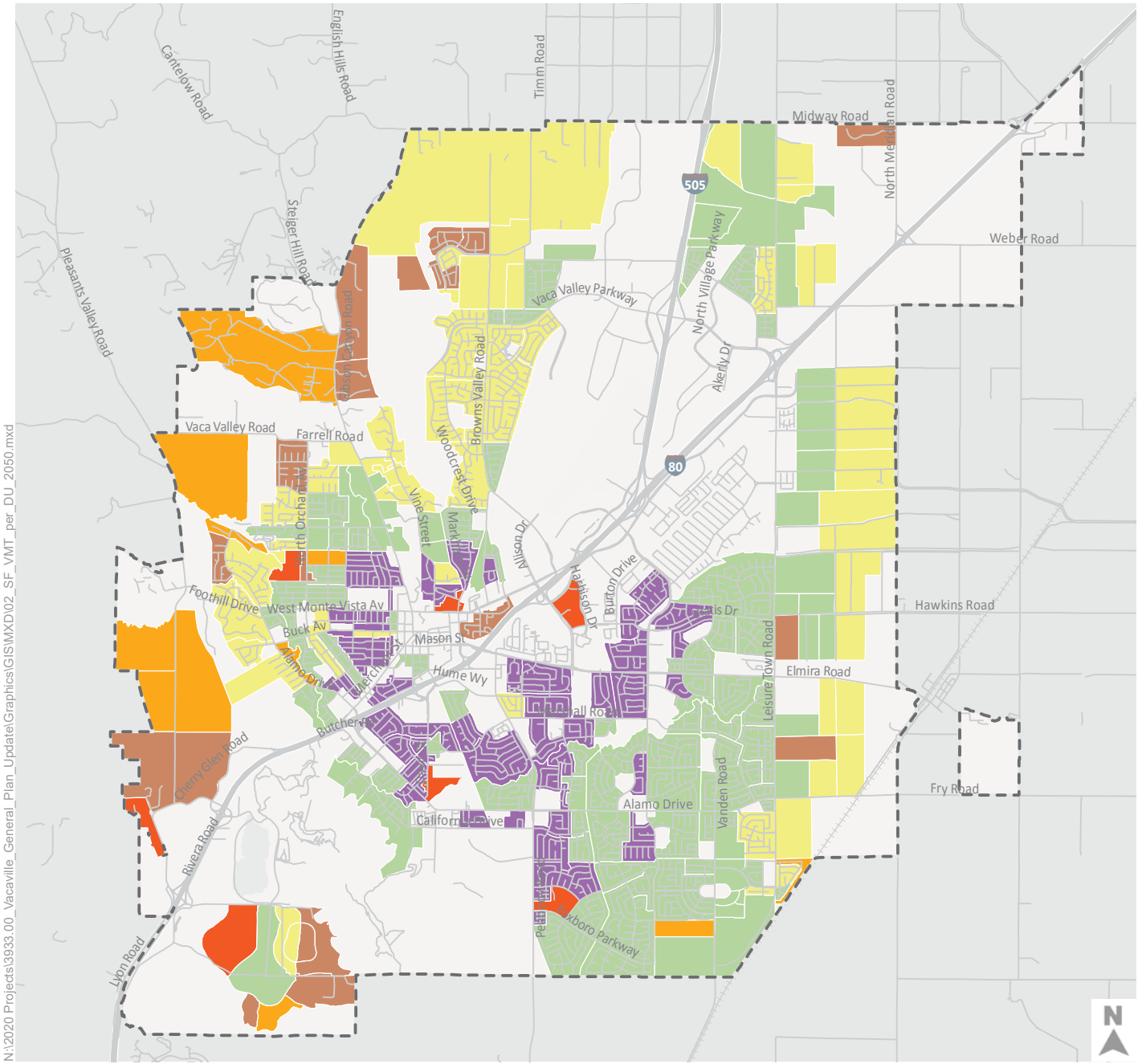

Figure 2

% Difference from Citywide Average Home-based VMT per DU (76.53)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Single Family DU

All Traffic Analysis Zones (TAZs) with at least 10 dwelling units are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

Home-based VMT per Single Family Dwelling Unit
Buildout Minus Northeast New Growth Area Scenario

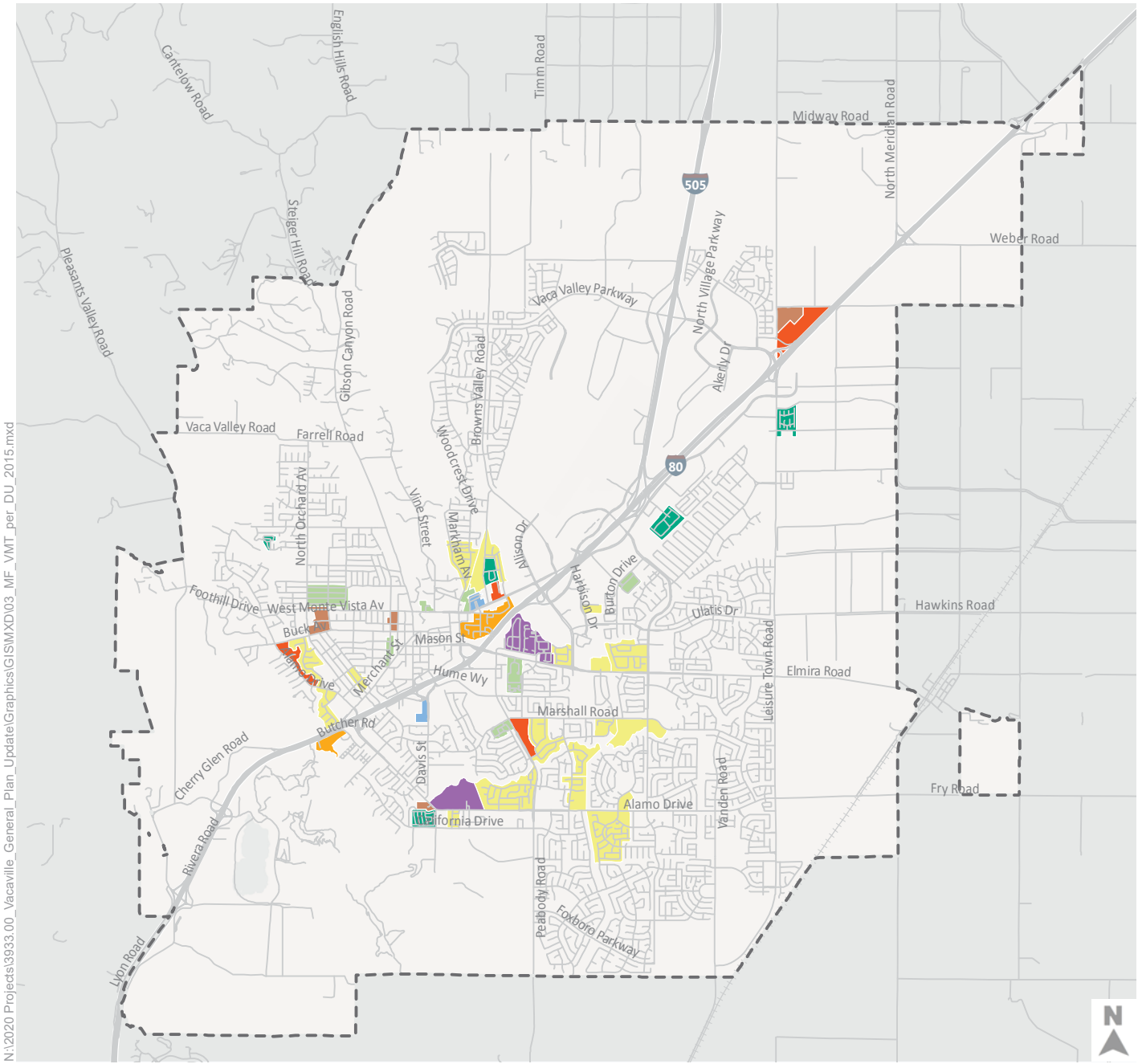

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Figure 3

% Difference from Citywide Average Home-based VMT per DU (58.49)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Multifamily DU

All Traffic Analysis Zones (TAZs) with at least 10 dwelling units are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

Home-based VMT per Multifamily Dwelling Unit
Base Year (2015) Conditions

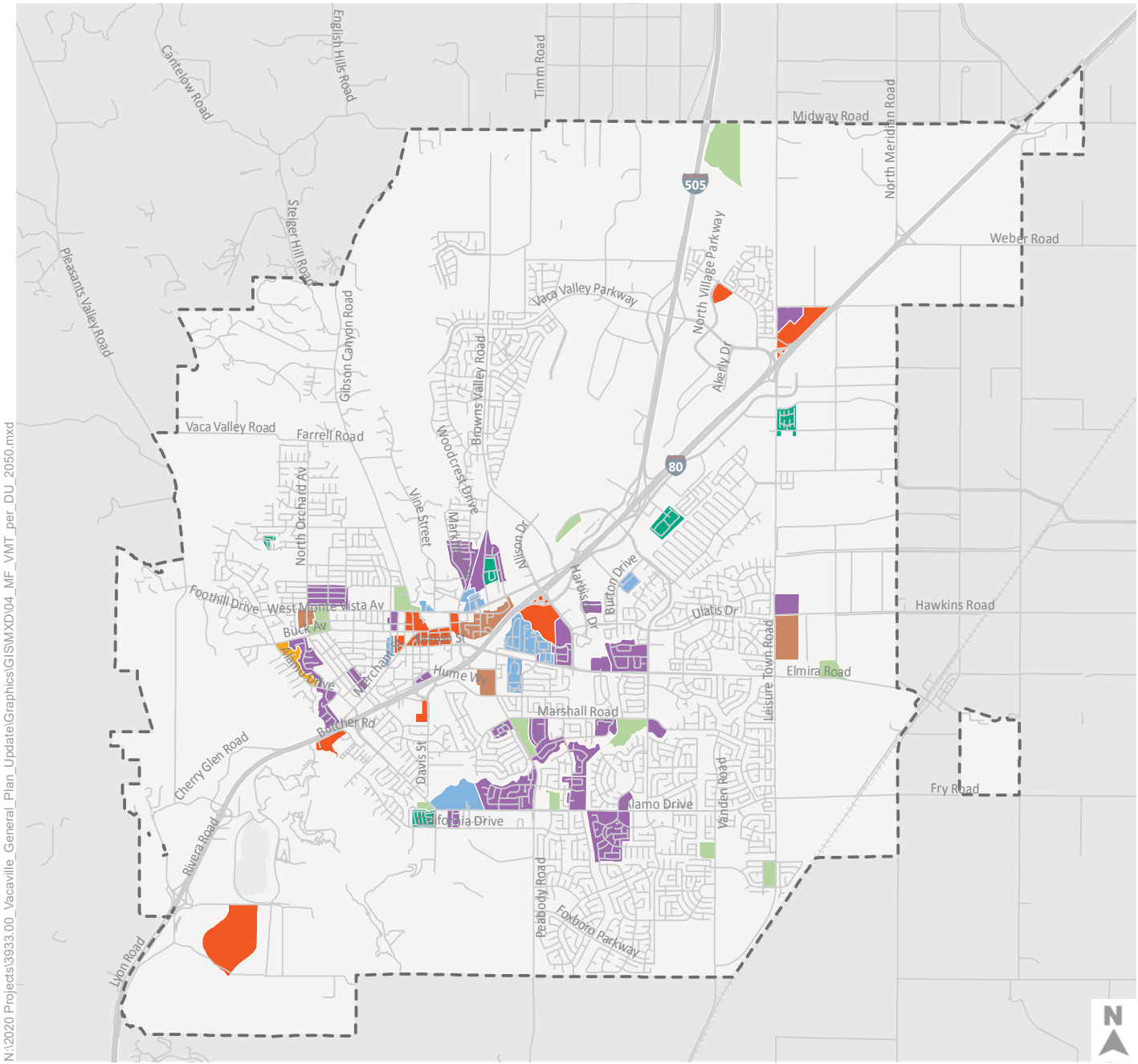

Figure 4

% Difference from Citywide Average Home-based VMT per DU (55.49)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Multifamily DU

All Traffic Analysis Zones (TAZs) with at least 10 dwelling units are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

Home-based VMT per Multifamily Dwelling Unit
Buildout Minus Northeast New Growth Area Scenario

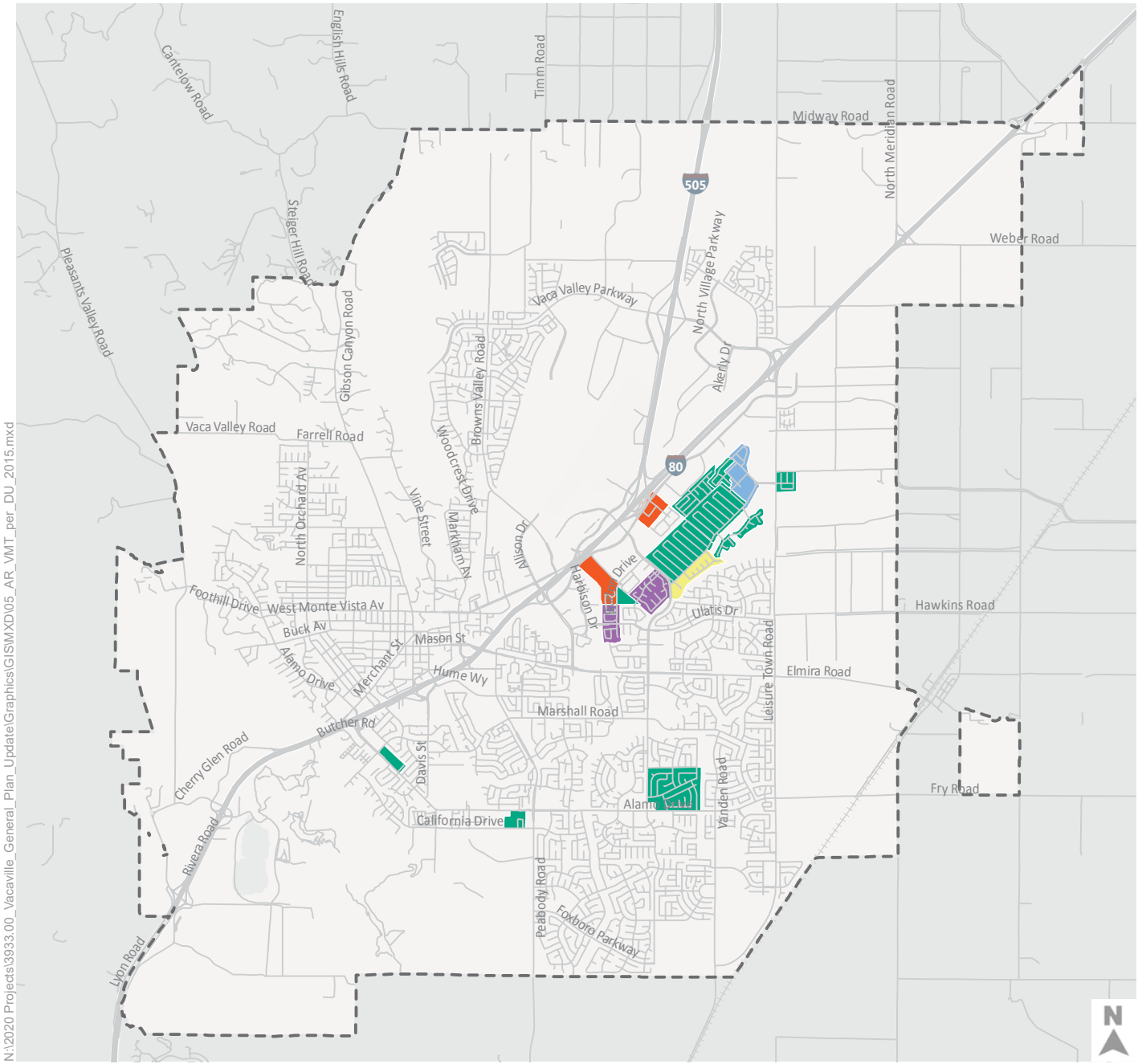

Figure 5

% Difference from Citywide Average Home-based VMT per DU (37.62)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Age-Restricted DU

All Traffic Analysis Zones (TAZs) with at least 10 dwelling units are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

Home-based VMT per Age-Restricted Dwelling Unit
Base Year (2015) Conditions

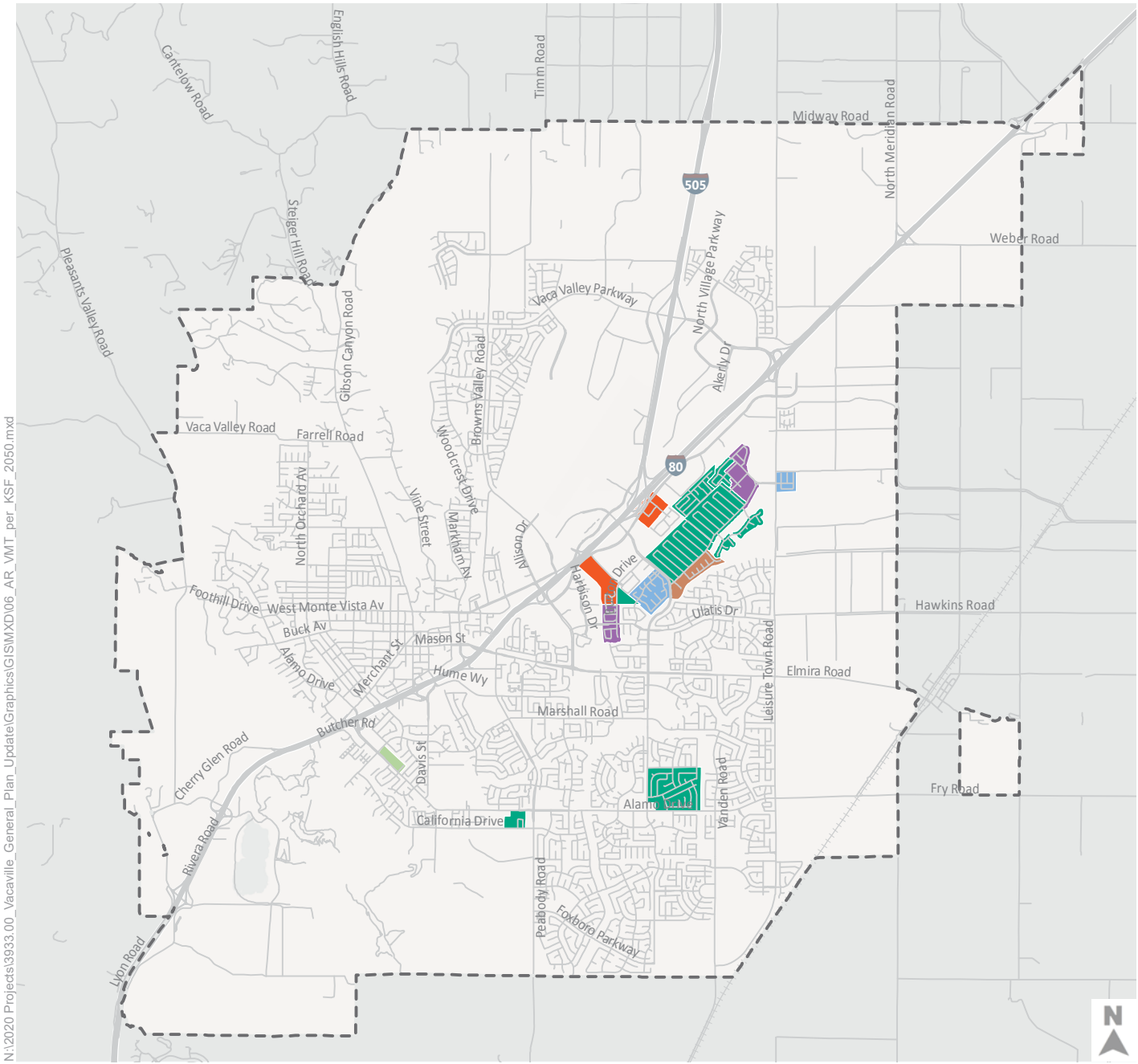

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Figure 6

% Difference form Citywide Average Home-based VMT per DU (34.96)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Age-Restricted DU

All Traffic Analysis Zones (TAZs) with at least 10 dwelling units are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

Home-based VMT per Age-Restricted Dwelling Unit
Buildout Minus Northeast New Growth Area Scenario

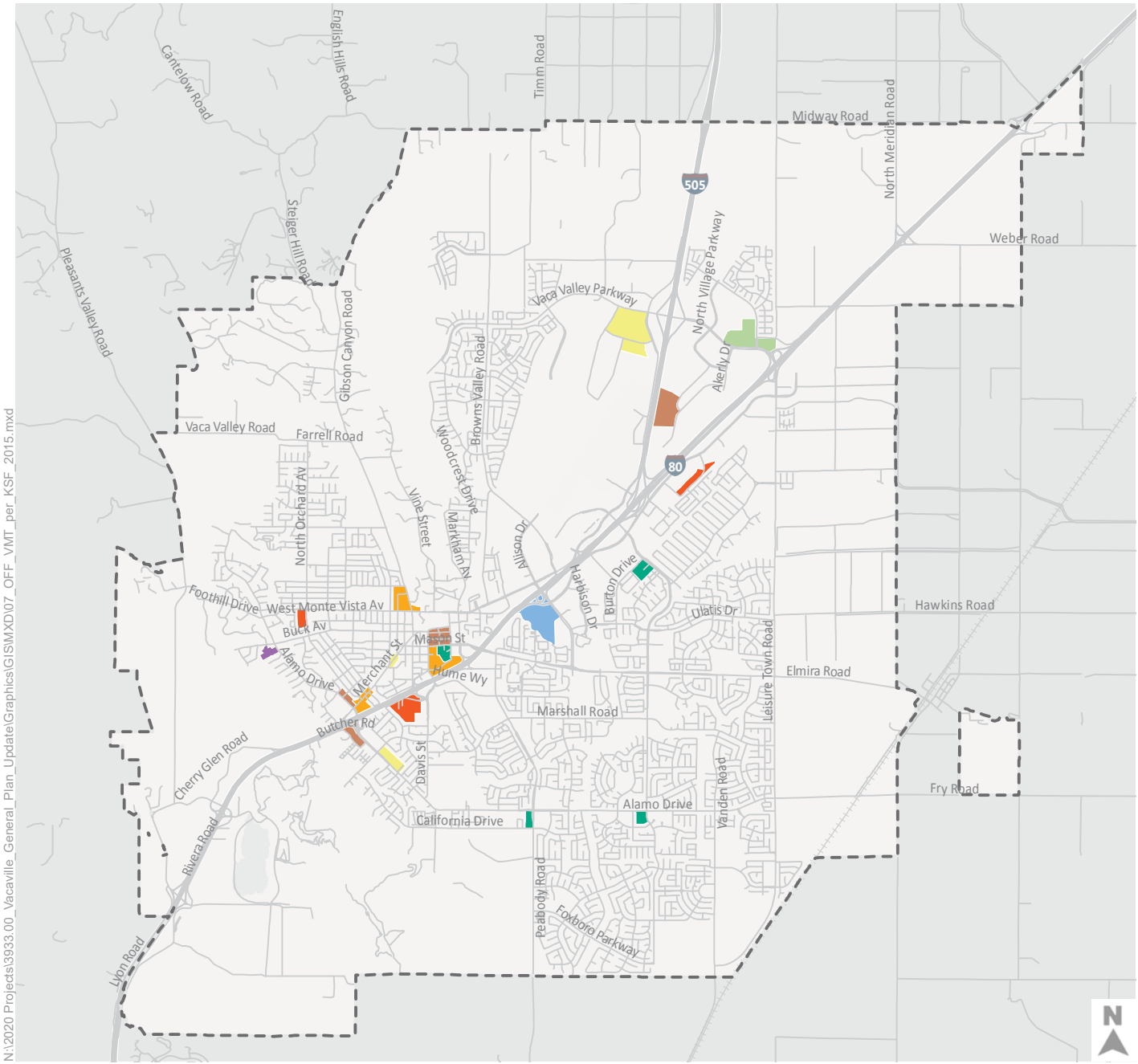

Figure 7

% Difference from Citywide Average VMT per KSF (90.75)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Office KSF

All Traffic Analysis Zones (TAZs) with at least 10 KSF are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

VMT per Office KSF
Base Year (2015) Conditions

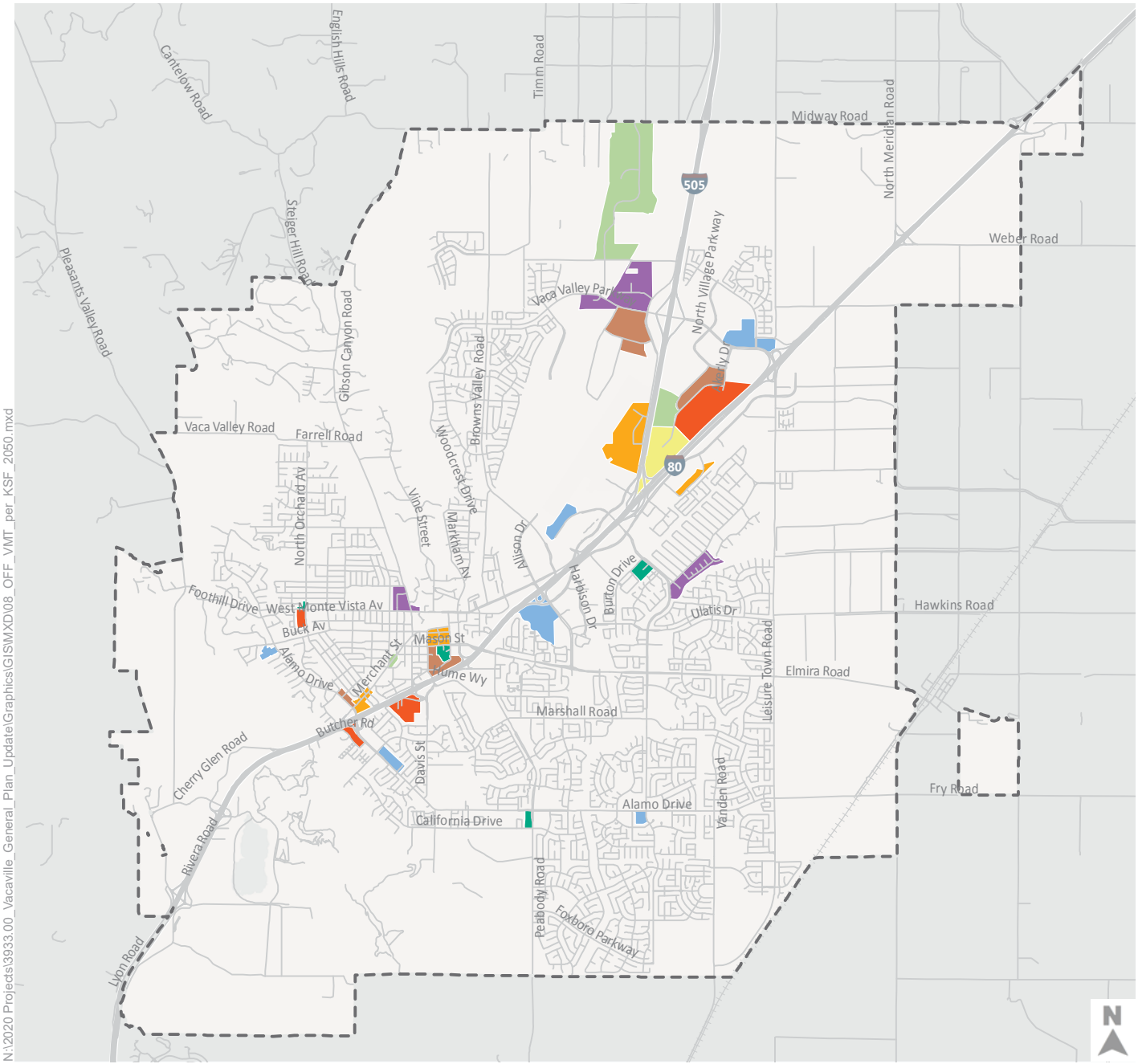

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Figure 8

% Difference from Citywide Average VMT per KSF (83.53)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Office KSF

All Traffic Analysis Zones (TAZs) with at least 10 KSF are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

VMT per Office KSF
Buildout Minus Northeast New Growth Area Scenario

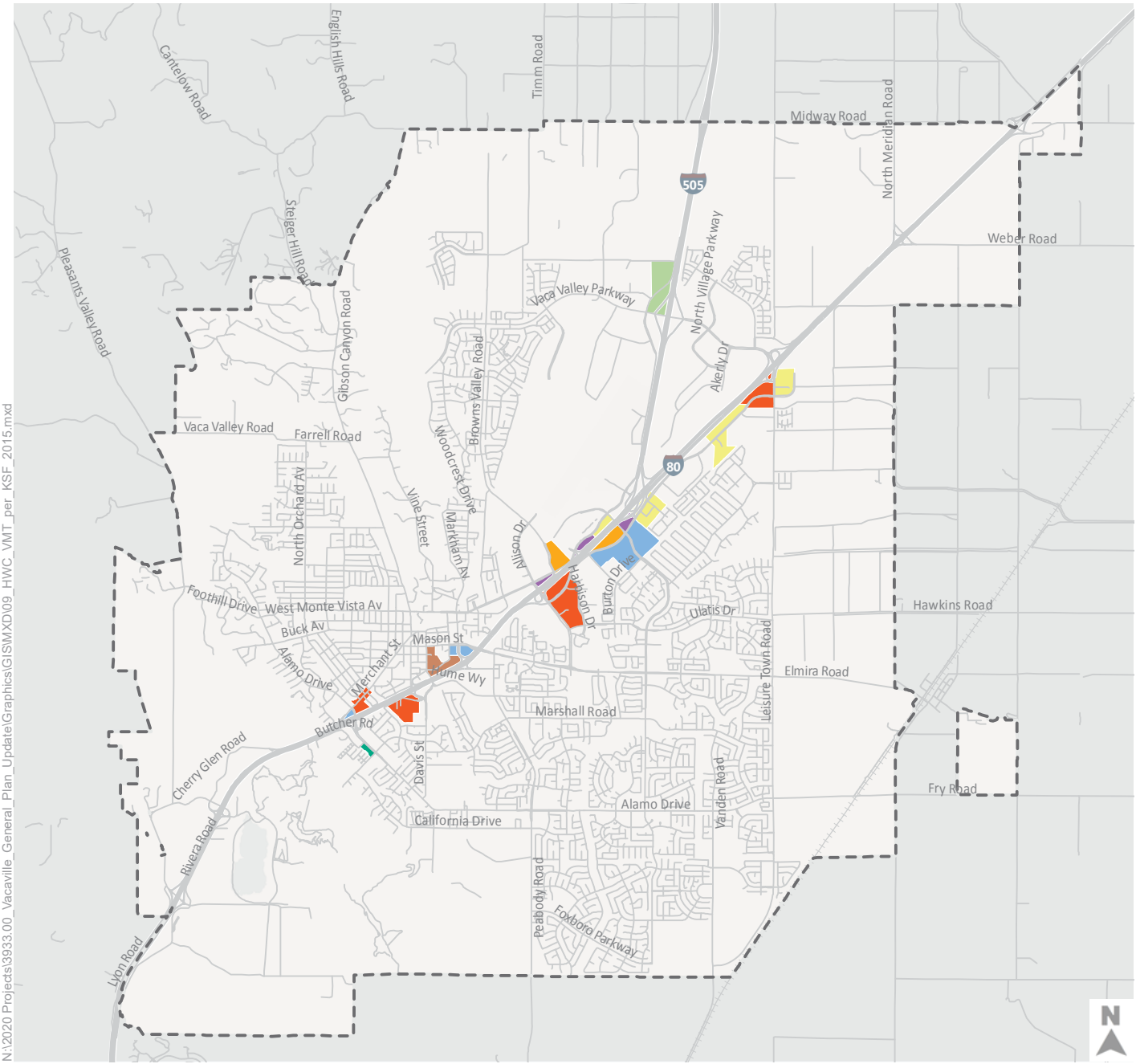

Figure 9

% Difference from Citywide Average VMT per KSF (158.17)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Highway Commercial KSF

All Traffic Analysis Zones (TAZs) with at least 10 KSF are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

VMT per Highway Commercial KSF
Base Year (2015) Conditions

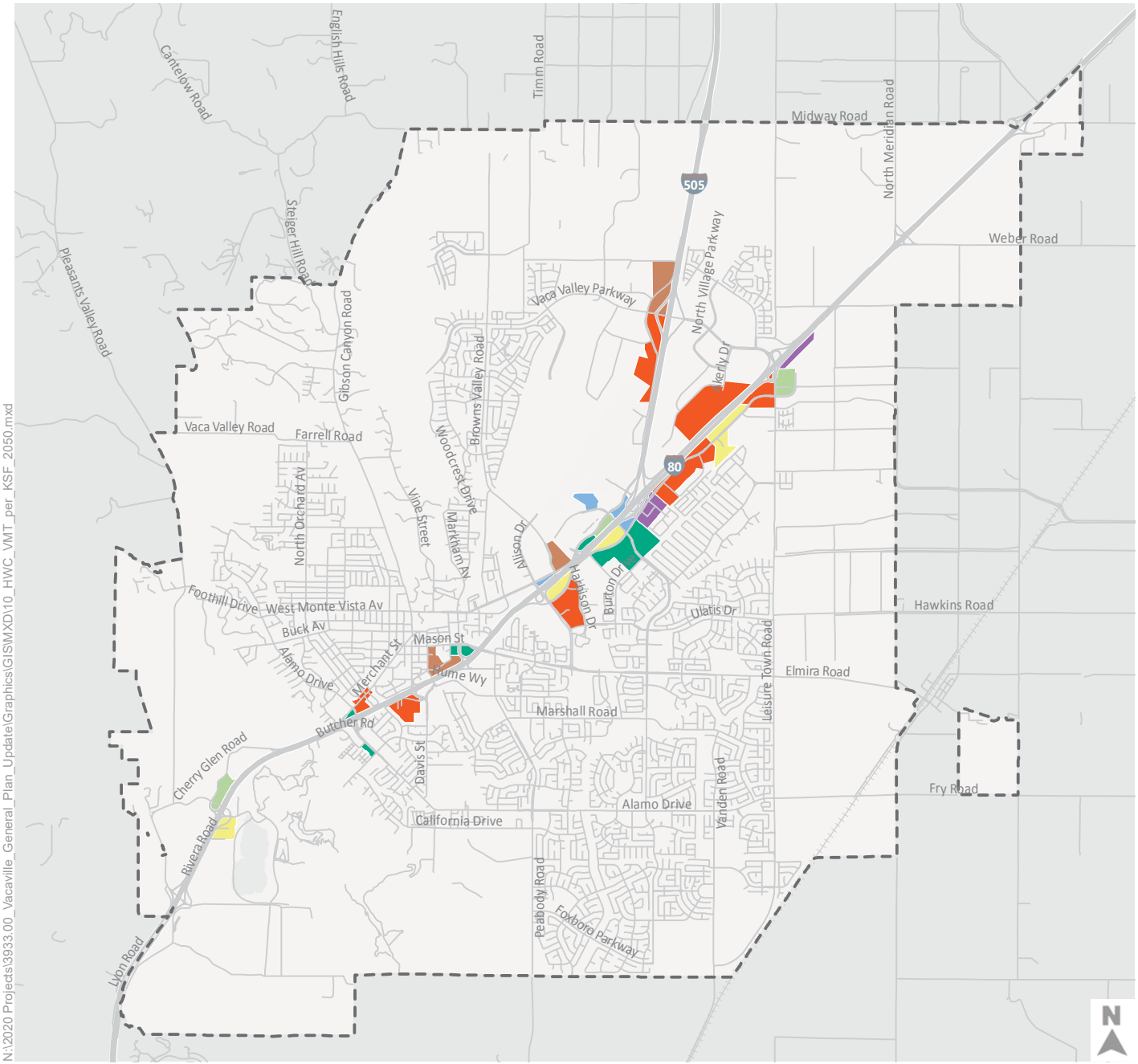

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Figure 10

% Difference from Citywide Average VMT per KSF (158.03)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Highway Commercial KSF

All Traffic Analysis Zones (TAZs) with at least 10 KSF are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

VMT per Highway Commercial KSF
Buildout Minus Northeast New Growth Area Scenario

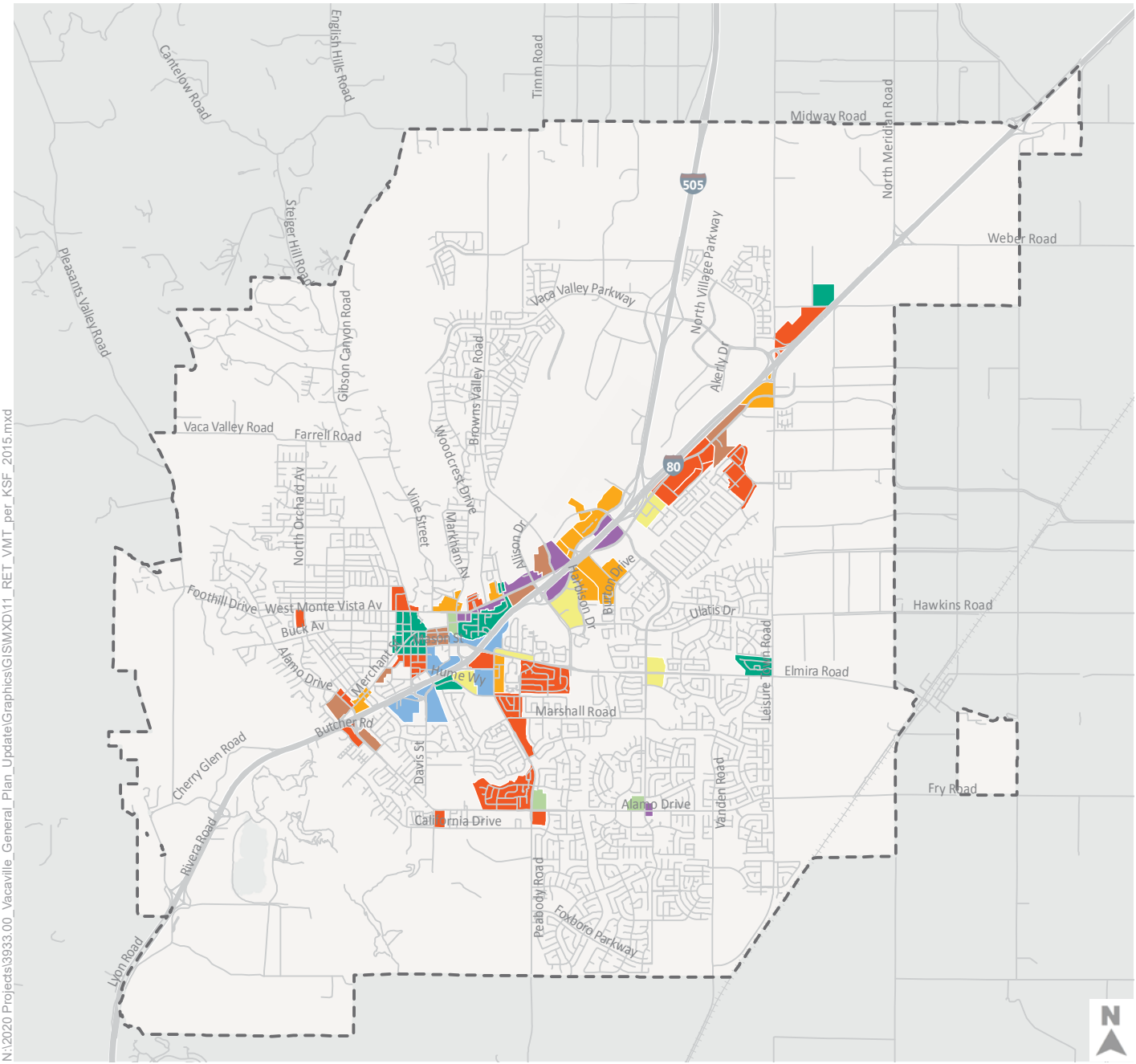

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Figure 11

% Difference from Citywide Average VMT per KSF (121.50)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Retail KSF

All Traffic Analysis Zones (TAZs) with at least 10 KSF are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

VMT per Retail KSF
Base Year (2015) Conditions

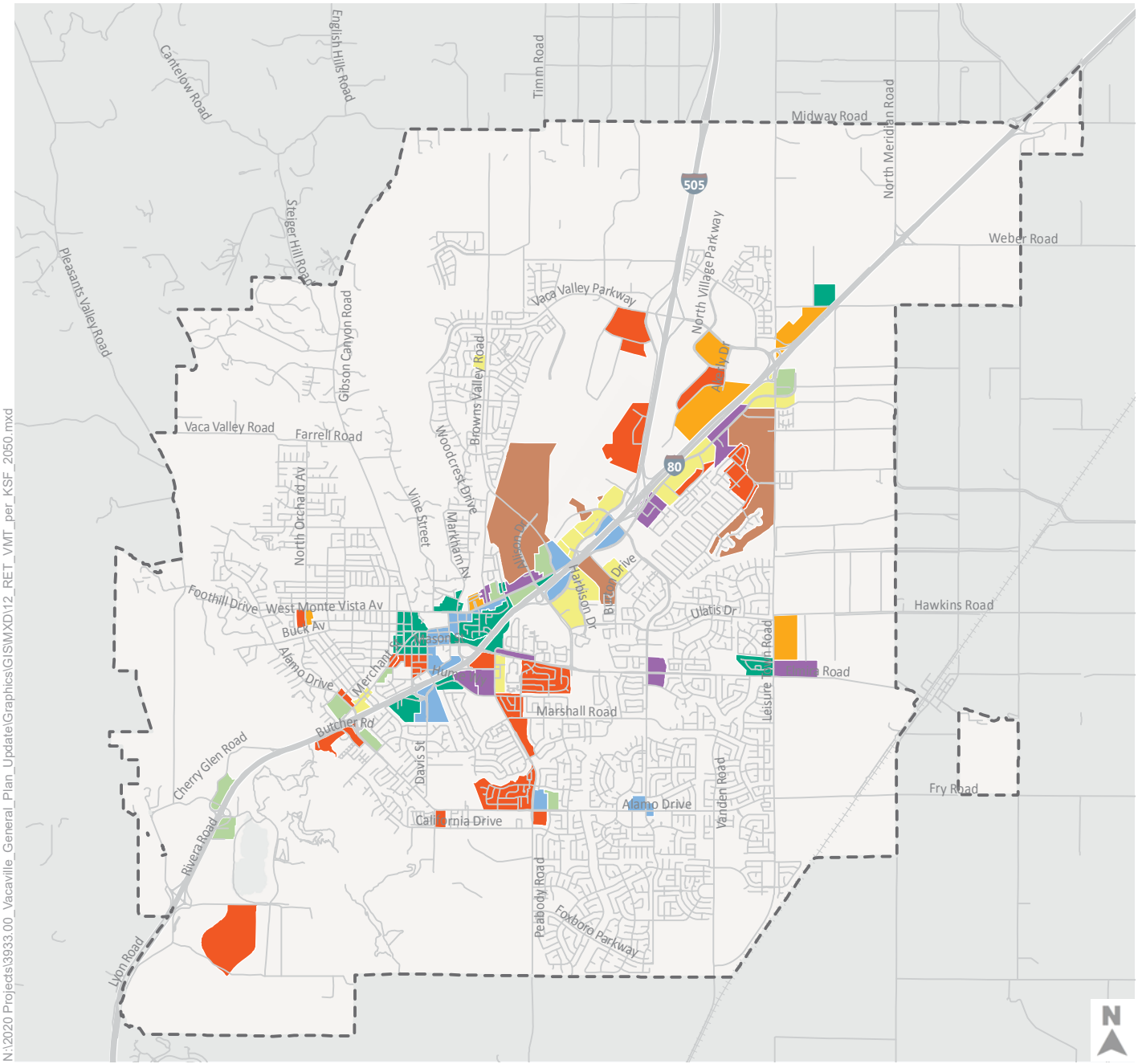

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Figure 12

% Difference from Citywide Average VMT per KSF (125.02)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Retail KSF

All Traffic Analysis Zones (TAZs) with at least 10 KSF are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

VMT per Retail KSF
Buildout Minus Northeast New Growth Area Scenario

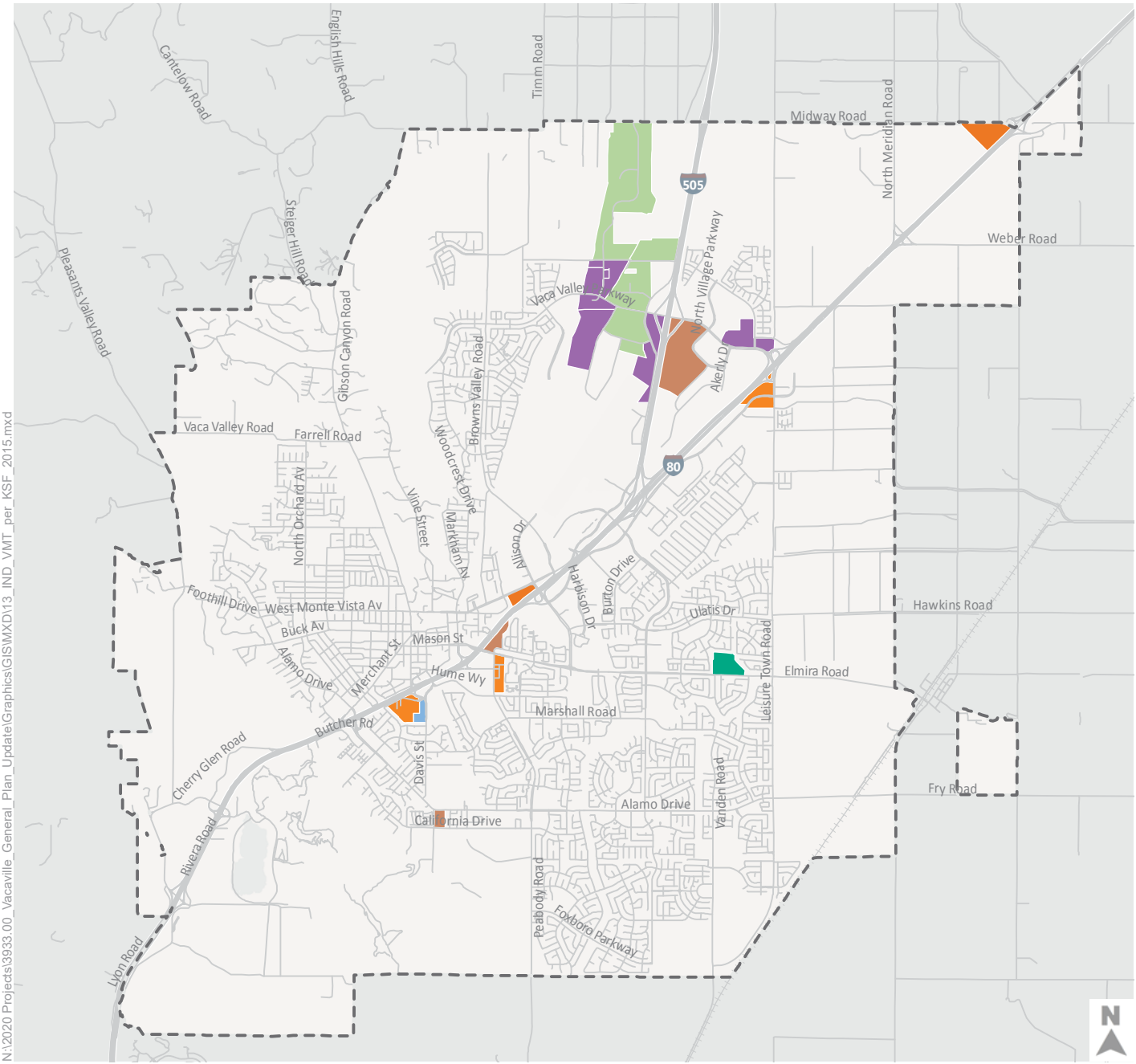

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Figure 13

% Difference from Citywide Average VMT per KSF (34.56)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Industrial KSF

All Traffic Analysis Zones (TAZs) with at least 10 KSF are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

VMT per Industrial KSF
Base Year (2015) Conditions

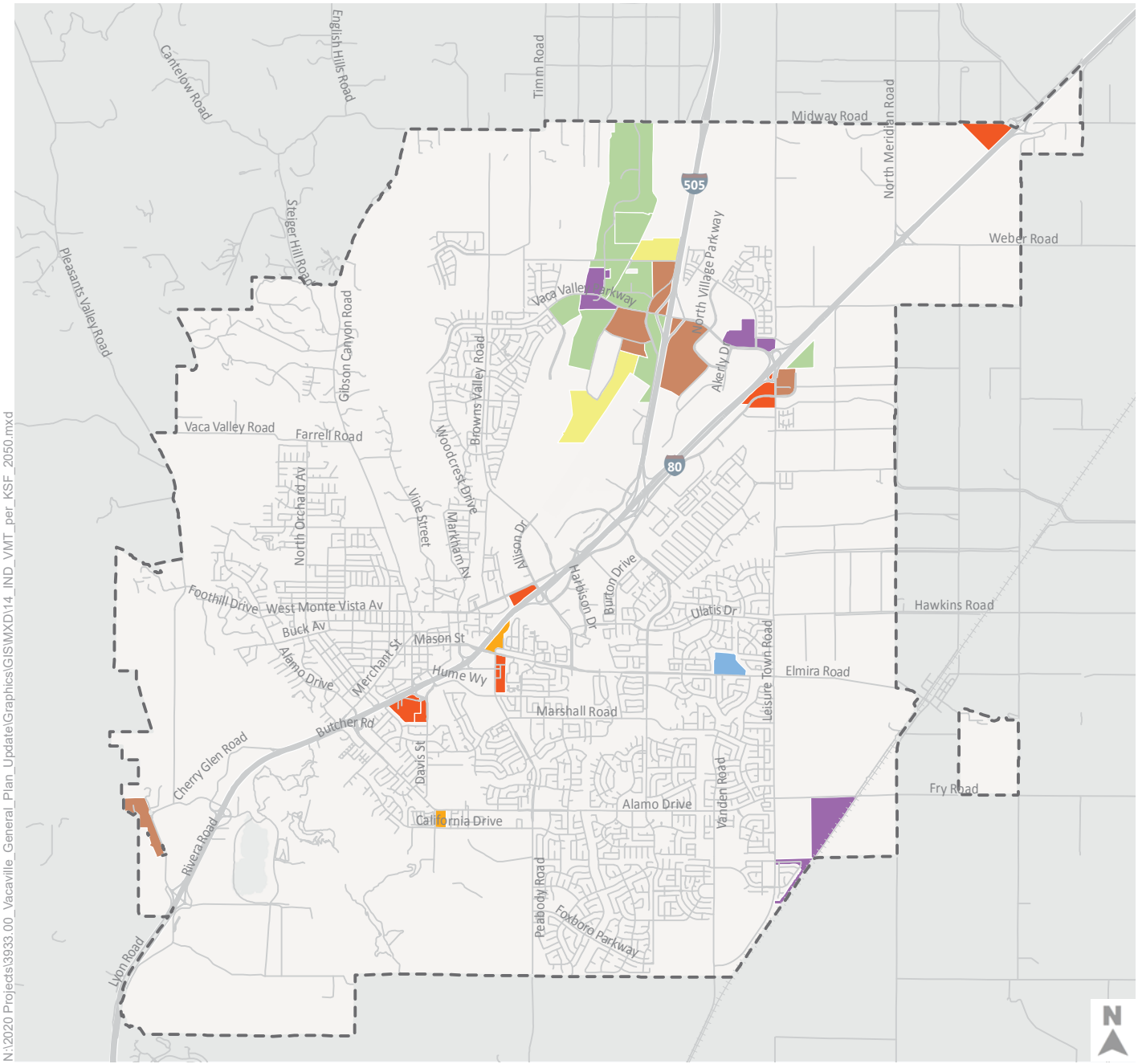

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Figure 14

% Difference from Citywide Average VMT per KSF (28.44)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Industrial KSF

All Traffic Analysis Zones (TAZs) with at least 10 KSF are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

VMT per Industrial KSF
Buildout Minus Northeast New Growth Area Scenario

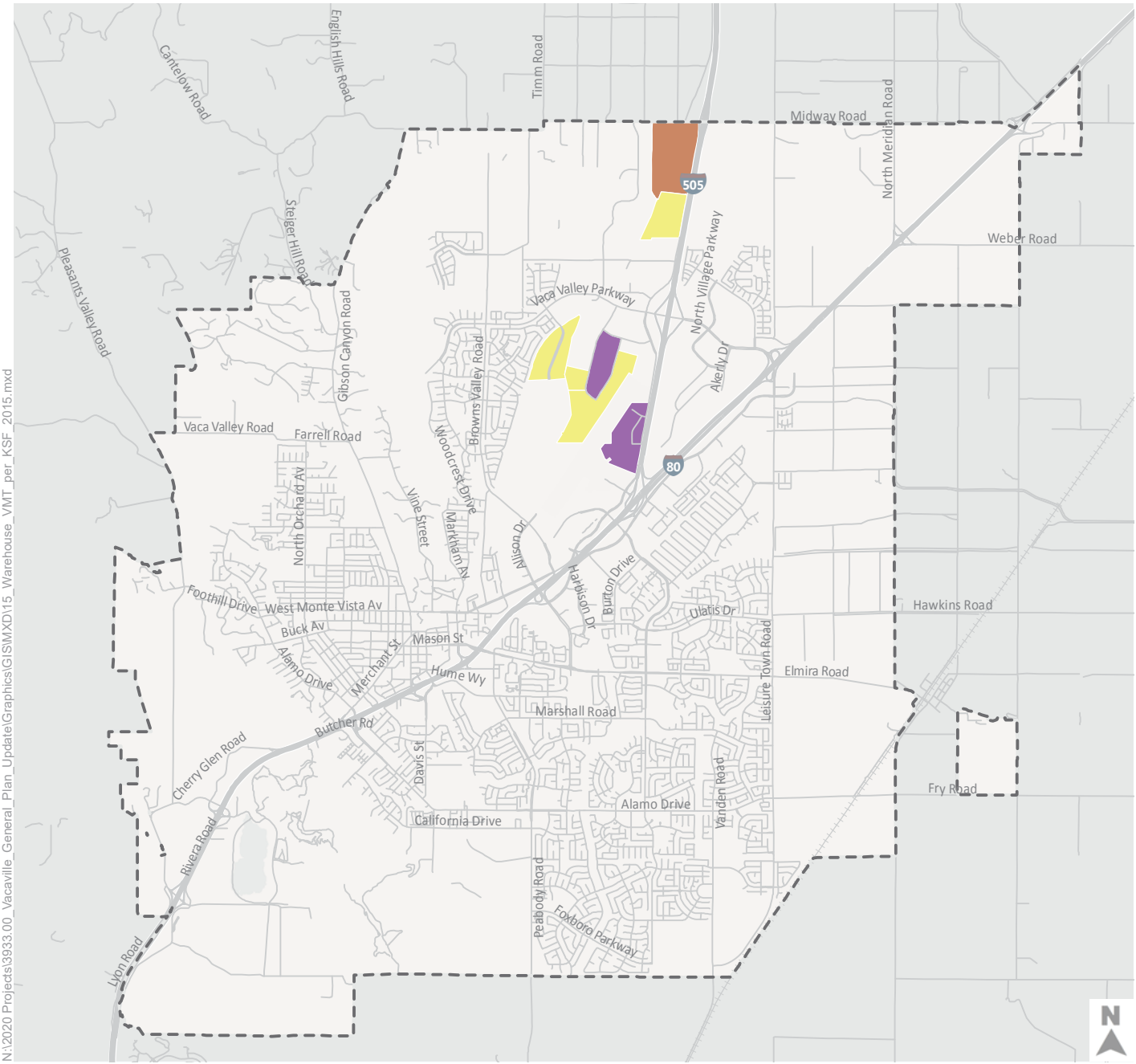

Figure 15

% Difference from Citywide Average VMT per KSF (34.56)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Warehouse KSF

All Traffic Analysis Zones (TAZs) with at least 10 KSF are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

VMT per High-Cube Warsehouse KSF
Base Year (2015) Conditions

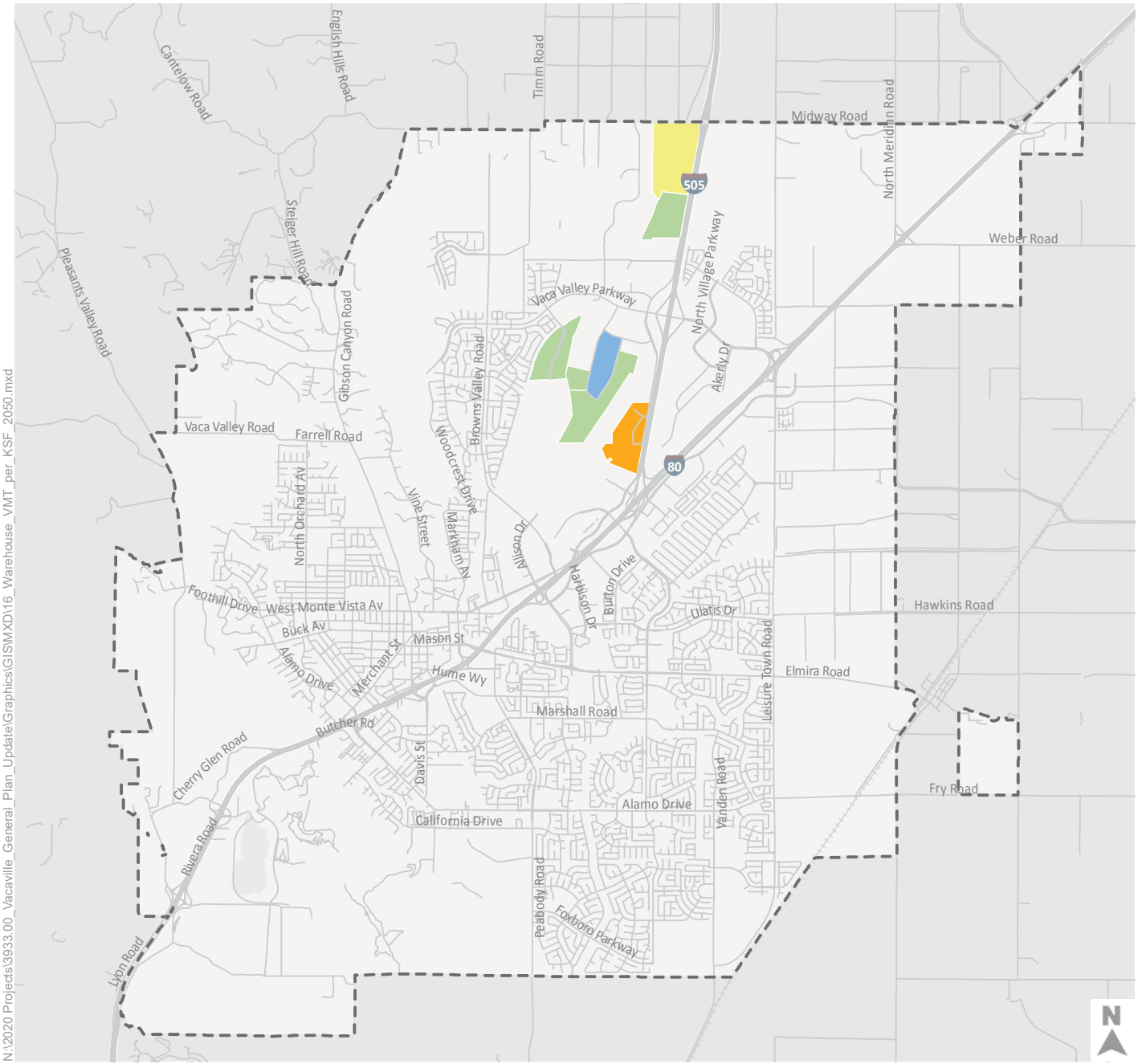

Figure 16

% Difference from Citywide Average VMT per KSF (15.69)

- ≤ -15%
- -10% to -14.9%
- -5% to -9.9%
- 0% to -4.9%
- +5% to +0.1%
- +10% to +5.1%
- +20% to +10.1%
- > +20%

Urban Growth/Model Boundary

TAZs with <10 Warehouse KSF

All Traffic Analysis Zones (TAZs) with at least 10 KSF are allocated a color according to its relative VMT efficiency to the left. In many instances, a single TAZ may include multiple land uses, which means they show VMT efficiency on multiple figures. All VMT estimates are derived from the City of Vacaville travel demand model. VMT includes all home-based weekday daily travel (with trip lengths not truncated at political boundaries).

VMT per High-Cube Warsehouse KSF
Buildout Minus Northeast New Growth Area Scenario