MEMORANDUM

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DATE: December 4, 2023
TO: Tracy Zinn, T&B Planning, Inc.
FROM: Alex So, Urban Crossroads, Inc.
JOB NO: 15091-01 VMT - Mitigation

MEAD VALLEY COMMERCE CENTER VEHICLE MILES TRAVELED (VMT) MITIGATION ASSESSMENT

Urban Crossroads, Inc. has prepared the following Vehicle Miles Traveled (VMT) Mitigation Assessment for the Mead Valley Commerce Center (PPT220050) (**Project**), which is located south of Cajalco Road between Decker Road and Seaton Avenue in the County of Riverside.

BACKGROUND

The Mead Valley Commerce Center (PPT220050) Vehicle Miles Traveled (VMT) Analysis (Urban Crossroads, Inc. July 11, 2023) previously evaluated the development of a 1,003,510 square foot warehouse building and an active park of up to 14.94 acres. The analysis identified that the Project was estimated to exceed the County's adopted impact threshold by 22.5%. The purpose of this assessment is to evaluate trip reduction measures that have the potential to reduce project generated VMT to the extent feasible.

VMT REDUCTION MEASURES

The California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (December 2021) (**Handbook**) (1) has been utilized to determine trip reduction measures that may be applicable to the Project. The Handbook describes methods to quantify reductions in greenhouse gas emissions and in the case of Transportation measures associated reductions in VMT. This evaluation will focus on a review of the Handbook's Transportation measures that are determined to be applicable to the Project.

SELECTING MEASURES

To determine which Transportation measures should be considered from the Handbook, project type, scale and locational context are identified as key factors for determining a measures applicability to a given project. The Handbook contains a factsheet for each measure that describes the measure, locational context, scale of application, implementation requirements and other considerations that should be reviewed to determine a measure's applicability.

PROJECT TYPE

Project type is an important consideration when determining which measures are applicable for consideration. For example, measures associated with neighborhood design are not applicable to an office project, whereas trip reduction programs intended to reduce employee commute VMT would not be applicable to an apartment project.

SCALE

The Handbook identifies that measures can be applied at different scales or geographic levels, however, "some measures may only be applicable at the project-level, whereas others may be more appropriate within a broader planning context such as for a general plan or climate action plan." The geographic levels considered in the Handbook include Project/Site and Plan/Community. Project/Site applies to measures that can reduce VMT at the scale of an individual development project or employer. Plan/Community refers to measures that reduce VMT at the scale of a specific plan, general plan or climate action plan. Transportation measures can be quantified at either the Project/Site scale or the Plan/Community scale, but never both.[1]

LOCATIONAL CONTEXT

The Handbook describes that locational context is "used to identify trip reduction measures within the transportation sector that are appropriate in certain types of neighborhoods differentiated by transportation characteristics and level of development (e.g., urban, rural, suburban)." More specifically, rural, suburban and urban are defined as follows:

Rural: An area characterized by little development. Compared to urban and suburban areas, rural areas have a lower density of residences, higher numbers of single-family residences, and higher numbers of vehicle dependent land use patterns. Where applicable, the Handbook provides three land use distinctions within the rural locational context category—R_a, R_b, and R_c. R_a refers to rural areas within a master-planned community. These rural areas often include a broad offering of amenities and services, which may be accessed by walking or other alternative forms of transportation. R_b refers to rural areas adjacent to a commuter rail station with convenient rail service to a major employment center. As the name implies, these rural areas have greater access to commuter rail as an alternative mode of transportation. R_c refers to rural areas with transit service and that are near jobs/services.

Suburban: An area characterized by dispersed, low-density, single-use, automobile dependent land use patterns, usually outside of the central city. Also known as a suburb.

Urban: An area located within the central city with higher density land uses than in the suburbs. Often characterized by multi-family housing, tall office buildings and dense retail.

Unincorporated Riverside County is often considered rural because it is characterized by open spaces, agricultural areas, and a lower population density compared to urban or suburban areas. Additional factors contributing to the perception of unincorporated Riverside County as rural include:

[1] Handbook, Page 37

Agricultural and Open Spaces: Much of unincorporated Riverside County consists of rural landscapes, including agricultural land, open spaces, and undeveloped areas. This contributes to a more rural character compared to densely populated urban or suburban areas.

Lower Population Density: Rural areas typically have lower population density, with larger distances between homes and businesses. Unincorporated areas in Riverside County may have fewer residential developments and commercial establishments compared to urbanized cities.

Nature and Wilderness: Some parts of unincorporated Riverside County may include natural reserves, parks, and wilderness areas. These features contribute to a rural ambiance and are often associated with less densely populated regions.

The Project is located within the Mead Valley area of unincorporated Riverside County that is characterized by open space, industrial uses located along the I-215 Freeway corridor and low density residential development. The residential areas include both paved and unimproved roads that in many cases lack sidewalks, curbs and gutters. The area at this time lacks a diverse mix of land uses, which tends to limit non-auto modes of transportation such as walking and biking. Additionally, high quality transit options in the vicinity are extremely limited and most are not within a reasonable walking distance. It is for these reasons that the Project's locational context is determined to be characteristically rural as it is dominated by open space, lower density residential and vehicle dependent land use patterns.

TRANSPORTATION MEASURES

As noted in the Handbook, Transportation section measures "promote transit and alternative transportation, support use of alternatively fueled vehicles, or encourage land use planning practices that reduce vehicle trips and vehicle miles traveled (VMT). Measures within the transportation sector are separated into six subsectors: Land Use, Neighborhood Design, Parking or Road Pricing Management, Transit, Trip Reduction Programs, and Clean Vehicles and Fuels."[2] For the purposes of this evaluation, the measures listed within the Trip Reduction Programs subsector that are focused on reducing employee commute VMT would be most applicable to the Project's industrial land use.

TRIP REDUCTION PROGRAMS SUBSECTOR

Each factsheet within the Trip Reduction Programs subsector was reviewed to determine each measures applicability to the Project. Attachment A lists each of the reviewed measures (i.e., T-5 through T-13 and T-23) along with a determination of each measure's applicability to the Project. As indicated in Attachment A, many of the measures in this subsector are not appliable in a rural context due to the limited availability of transit and other non-auto dependent travel modes. Measure **T-11 Provide Employer-Sponsored Vanpool** is applicable in a rural context, however, as noted in the Handbook "vanpool programs are more appropriate for the building occupant or tenant (i.e., employer) to implement and monitor than the building owner or developer." The quantification below assumes that a potential future tenant implements this measure using default values supplied by the Handbook's calculation factsheet. However, any VMT reductions are purely speculative, as the Project does not have a known tenant.

[2] Handbook, Page 30

T-11 PROVIDE EMPLOYER-SPONSORED VANPOOL

This measure will implement an employer-sponsored vanpool service. Vanpooling is a flexible form of public transportation that provides groups of 5 to 15 people with a cost-effective and convenient rideshare option for commuting. The mode shift from long-distance, single-occupied vehicles to shared vehicles reduces overall commute VMT. Calculation variables and formula are as follows in Table 1:

TABLE 1: VMT REDUCTION CALCULATION VARIABLES

ID	Variable	Value	Unit	Source
A	Percent reduction in GHG emissions from Project/Site employee commute VMT	3.4-20.4	%	calculated
User Inputs				
	None			
Constants, Assumptions, and Available Defaults				
B	Percent Employees that participate in vanpool program	2.7	%	SANDAG 2019
C	Average length of one-way vehicle commute trip in region	18.62	miles per trip	FHWA 2017
D	Average length of one-way vanpool commute trip	42	miles per trip	SANDAG 2019
E	Average vanpool occupancy (including driver)	6.25	occupants	SANDAG 2019

$$A = \frac{\left((1-B)\times C\right) + \left(B \times \frac{D}{E}\right)}{\left((1-B)\times C\right) + (B \times D)} \times -1$$

As calculated in Table 1, if the Project's potential future tenant implements T-11 Provide Employer-Sponsored Vanpool. The Project can expect a 1.73% reduction to the Project's VMT impact. However, even with the implementation and inclusion of T-11 the Project would not be able to reduce its VMT impact to a level of less than significant. As noted previously, the implementation results are not guaranteed as a potential future tenant is currently unknown.

Based on the Handbook's documented limitations of locational context, scale, and the nature of Project's speculative building, the Project will not be able to reduce project generated VMT to a level of less than significant.

If you have any questions, please contact me directly at aso@urbanxroads.com.

REFERENCES

1. **CAPCOA.** *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity .* December 2021.

ATTACHMENT A
TRIP REDUCTION PROGRAMS SUBSECTOR

TABLE A-1: TRIP REDUCTION PROGRAMS SUBSECTOR

Subsector	Measure	Scale of Application	Applicable Locational Context	Applicability to Project
Trip Reduction Programs	**T-5 Implement Commute Trip Reduction Program (Voluntary)** This measure will implement a voluntary commute trip reduction (CTR) program with employers.	Project/ Site	Urban, Suburban	Not Applicable in Rural Context.
	T-6 Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring) This measure will implement a mandatory CTR program with employers. CTR programs discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking, thereby reducing VMT and GHG emissions.	Project/ Site	Urban, Suburban	Not Applicable in Rural Context.
	T-7 Implement Commute Trip Reduction Marketing This measure will implement a marketing strategy to promote the project site employer's CTR program. Information sharing and marketing promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking, thereby reducing VMT and GHG emissions.	Project/ Site	Urban, Suburban	Not Applicable in Rural Context.
	T-8 Provide Ridesharing Program This measure will implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers.	Project/ Site	Urban, Suburban	Not Applicable in Rural Context.
	T-9 Implement Subsidized or Discounted Transit Program This measure will provide subsidized or discounted, or free transit passes for employees and/or residents.	Project/ Site	Urban, Suburban	Not Applicable in Rural Context.
	T-10 Provide End-of-Trip Bicycle Facilities This measure will install and maintain end-of-trip facilities for employee use. End-of-trip facilities include bike parking, bike lockers, showers, and personal lockers.	Project/ Site	Urban, Suburban	Not Applicable in Rural Context.
	T-11 Provide Employer-Sponsored Vanpool This measure will implement an employer-sponsored vanpool service. Vanpooling is a flexible form of public transportation that provides groups of 5 to 15 people with a cost-effective and convenient rideshare option for commuting.	Project/ Site	Urban, Suburban, Rural	Reduction is not quantifiable nor enforceable due to a speculative building with an unknown employer.
	T-12 Price Workplace Parking This measure will price onsite parking at workplaces. Because free employee parking is a common benefit, charging employees to park onsite increases the cost of choosing to drive to work	Project/ Site	Urban, Suburban	Not Applicable in Rural Context.
	T-13 Implement Employee Parking Cash-Out This measure will require project employers to offer employee parking cash-out. Cash-out is when employers provide employees with a choice of forgoing their current subsidized/free parking for a cash payment equivalent to or greater than the cost of the parking space. This encourages employees to use other modes of travel instead of single occupancy vehicles.	Project/ Site	Urban, Suburban	Not Applicable in Rural Context.
	T-23 Provide Community-Based Travel Planning This measure will target residences in the plan/community with community-based travel planning (CBTP). CBTP is a residential-based approach to outreach that provides households with customized information, incentives, and support to encourage the use of transportation alternatives in place of single occupancy vehicles.	Plan/ Community	Urban, Suburban	Does not apply at the Project/Site scale. Not Applicable in Rural Context.

Source: Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, California Air Pollution Control Officers Association (CAPCOA), December 2021.
Notes:
1. Per CAPCOA Handbook, the combined maximum for each subsector or total across subsectors is calculated as:
1 - ((1-A)*(1-B)*(1-C)*(1-D)...); where, A, B, C, and D... represent the percent reduction for individual measures or subsectors.