California Department of Transportation

DISTRICT 1
P.O. BOX 3700 | EUREKA, CA 95502–3700
(707) 445-6600 | FAX (707) 441-6314 TTY 711
www.dot.ca.gov

March 7, 2022

1-HUM-101/255
Arcata General Plan 2045
SCH# 2022020107

Governor's Office of Planning & Research

Mar 08 2022

STATE CLEARINGHOUSE

Mr. David Loya, Director
Community Development Department
City of Arcata
736 F Street
Arcata, CA 95521

Dear Mr. Loya:

Thank you for giving Caltrans the opportunity to review and comment on the Notice of Preparation for the Arcata General Plan 2045 Environmental Impact Report. The planning horizon is approximately twenty years, during which time City decision makers will rely on the General Plan as the basis for making decisions on matters such as land use, transportation, open space and conservation, provision of public services, and environmental quality and safety. The "Gateway Area Plan" will be a new Element of the General Plan as well as associated zoning amendments to implement the Gateway Area Plan. The Gateway Area Plan will provide additional specificity within the Gateway Area, which is an area of approximately 138 acres, located generally north from Samoa Blvd, largely west of K Street, and south of Alliance Rd. The General Plan update, Gateway Area Plan and zoning updates collectively comprise the "Project." We offer the following comments:

Vehicle Miles Traveled (VMT)
Caltrans has a responsibility to help California achieve a carbon-neutral future by the year 2045. The Caltrans Strategic Plan for 2020-2024 calls for Caltrans to enhance and connect the multimodal transportation network and to lead Climate Action. By the end of the General Plan Update's planning period, the State is seeking to achieve carbon neutrality. To meet the State's targets to reduce carbon emissions and energy consumption, we offer to partner with the City to plan for a more sustainable transportation system through a reduction in VMT and carbon consumption/emissions.

Emissions from the transportation sector make up the largest contributor to GHG emissions in the State. According to California Air Pollution Control Officers Association (CAPCOA), four or five of the ten most effective and efficient greenhouse gas reduction strategies have to do with the transportation system and are within the control of local governments. The following strategies are recommended as initial points of focus for future local government General Plan policies and Climate Action Plan development and include:

1) Promotion of smart growth, jobs/housing balance, transit-oriented development, and infill development through land use designations, zoning, and public-private partnerships.
2) Support for and funding of transit, bicycle, and pedestrian connections through transit and trail planning and regional cooperation.
4) Promotion of green procurement and alternative fuel vehicle use through municipal mandates and voluntary bid incentives.
5) Support for alternative fuel facilities and infrastructure through land use designations, zoning, and public-private partnerships.
10) Regional cooperation to find cross-regional efficiencies in GHG reduction investments and to plan for regional transit, energy generation, and waste recovery facilities.

The development of compact housing has been shown to result in lower VMT per household when compared to less dense housing. Affordable housing produces less VMT compared to market-rate housing. To the extent that future projects contribute to such housing, medium- or high-density residential developments can take credit for the VMT reduction compared to business-as-usual housing. Compared to measures that attempt to reduce VMT in traditional single-family residential neighborhoods, denser, more affordable housing is a powerful VMT-reduction tool.

Factors Influencing VMT:

- Density of housing relative to typical or existing
- Affordability of new housing
- The level of contribution committed by project mitigation
- Location of the housing project

Ways to measure VMT Reduction:

For housing projects that result in higher densities, CAPCOA estimates a -0.22 reduction in household VMT for every percentage increase in density. To qualify as a VMT reducer, density must be higher than typical densities. CAPCOA sets the starting point at 9.1 dwelling units per acre. Lower density developments would not reduce VMT. CAPCOA caps the reduction at 21.5 units/acre, equivalent to a 30 percent reduction in household VMT.

Please note that the source material from CAPCOA considers density at the project level. However, if a very large housing project increases density in a larger geography, such as a TAZ or Census block group, it would be fair to consider the increase across the full geography, adding a VMT reduction for the existing homes to the calculation for the project itself.

For the purposes of lowering the City's carbon footprint and reducing harmful GHG emissions that result from inefficient land uses, we recommend establishing a minimum Citywide residential density of 9.1 units per acre.

Mixed Use/Employment Densities
To maximize the potential benefits of higher density residential development on VMT reduction goals, trip lengths can be shortened by establishing a greater mix of land uses. Locating higher density housing in close proximity to commercial uses where goods, services and employment are abundant can help to reduce trip length and the amount of energy consumed for transportation. CAPCOA (pages 73-75) sets 145 jobs/acre as a floor for realizing VMT benefits, and a maximum reduction of 30 percent from employment density. Reductions can be calculated using a (job) density-to-VMT elasticity of -0.07. This method must be applied to typical commute VMT for the development, a number determined through a traffic and parking study or may be available from the regional travel demand model or other sources of local travel data. If typical commute VMT is not available, it could be calculated by referring to the Institute of Transportation Engineers' (ITE) Trip Generation Manual and multiply the trips by trip lengths from a big-data tool.

Travel Demand Management (TDM)
Travel demand management can complement transportation infrastructure by influencing the travel mode that people choose when traveling to work, school, the grocery store, etc. Travel modes include transit, ridesharing, walking, biking, and telework. TDM programs can help make the most of our transportation and physical infrastructure so that options to driving are naturally encouraged and our systems are better balanced. TDM measures that may help to reduce VMT include transit and micro-mobility pass discounts, carpool matching and incentives, parking pricing, bike facilities at workplaces, vanpools, guaranteed-ride-home service for non-driving employees, education, and information on travel options other than the single-occupancy-vehicle (SOV). "Modernizing Mitigation" (2018) from the State Smart Transportation Initiative, describes VMT-focused TDM in more detail: <https://ssti.us/modernizing-mitigation/ >.

<u>Factors to consider</u>:
Senate Bill (SB) 743-relevant TDM measures should be designed to replace car trips with other modes or by increasing vehicle occupancy in motor vehicle trips (e.g., carpooling). TDM measures could work in tandem with workplace and residential density measures to reduce distances traveled.

We encourage the City to coordinate with the Humboldt County Association of Governments (HCAOG), the Regional Transportation Planning Agency for Humboldt County, to plan, program, and implement TDM measures that are suitable for the north coast context. Other collaborators could include local governments, employers, college campuses, transit systems (e.g. with free or discounted transit passes), and residential landlords (e.g. with priced parking).

Ways to measure impacts:
Determining the VMT effect from increased transit service can be done with two calculations:

- Ridership. Where service was established through applications for New Starts, Small Starts or state capital funding, the original ridership estimates may already be available in the form of passenger-miles-traveled. If none of these applications are available, the transit provider would need to help make an estimate.
- VMT. Converting transit ridership into VMT is thoroughly discussed in "An Update on Public Transportation's Impacts on Greenhouse Gas Emissions" (TCRP, 2021). To summarize, a passenger-mile on transit directly replaces 0.329 VMT, a number which takes into account that not all transit trips would have been taken by car. This value can be coupled with the land-use multiplier effect to compound the overall savings in VMT by up to two miles of reduction for every one passenger-mile traveled.

Public Transportation/Mass Transit
The transportation element will benefit from a clear definition of sustainability in the context of local transit service and conditions. The Federal Transit Administration (FTA) defines sustainable transit as enhancing the quality of life, meeting ambient air quality standards, reducing the need for more road construction, lower contribution to stormwater run-off, reducing fuel use and providing critical services for all members of society. Ultimately, sustainable transportation means designing public transit services that are attractive to the people who want to use them.

Useful links: <https://www.transit.dot.gov/regulations-and-programs/environmental-programs/transit-and-sustainability>,
<https://www.kittelson.com/ideas/3-ways-to-improve-public-transportation-sustainability/>,
<https://www.transportation.gov/mission/health/Expand-Public-Transportation-Systems-and-Offer-Incentives>,
<https://www.nytimes.com/2015/05/07/upshot/transportation-emerges-as-crucial-to-escaping-poverty.html>.

To promote and prioritize high quality transit that aligns with the City of Arcata's land use, housing, and economic development policies, we suggest that the City General Plan 2045 include the following:

- Consider zoning changes to increase density around existing transit corridors.
- Establish an inventory of transit supportive infrastructure/assets on the State Highway System.
    - Coordinate transit stops, transit centers and routes with bicycle and pedestrian infrastructure to create first and last mile connections.
    - Locations may include conventional highways and freeway interchange transit stops, connections to intermodal transit stations, mobility hubs, park and ride lots, regional and interregional transfer points,

- Assemble a toolbox of best practices, common standards, and types of infrastructure to consider on projects for the State Highway System. Consider a Complete Streets Elements Toolbox.
    - Potentially to include transit accessibility improvements, bus boarding islands with bikeways, highway crossing needs at transit stops, queue jump lanes, transit signal prioritization, bus shelters and other bus stop infrastructure improvements.
- A prioritization methodology for transit supportive infrastructure improvements at specific locations with potential funding opportunities.
- Integration with Statewide and Regional documents and plans, including the California Intercity Bus Study, Caltrans Race and Equity Action Plan…
    - Involve transit providers early in General Plan processes to ensure their alignment with community priorities.
    - Incorporate California planning priorities such as VMT reduction, GHG reduction, active transportation, equity and complete streets goals in City transportation and transit planning. This is accomplished by offering residents viable non-automobile travel choices (bike, ped and transit).
- Recommendations for transit performance objectives for City, regional, and interregional service.
- Aim to increase transit ridership by involving developer/residential and employer programs through general plan visions and goals that incentivize and reward public transit usage. This could be in the form of reduced rent, subsidies, reimbursements, or pre-tax payroll reductions.

High quality public transportation can make communities more equitable by increasing access to critical destinations such as employment, healthcare, and vital social services for low-income individuals and communities.

Local road networks/connectivity

Though highways were originally conceived as intercity or rural-serving facilities, today in most places they facilitate mostly local and intraregional travel. The large volume of short-distance traffic is both a problem – it undercuts highways' original purpose, for example by delaying intercity or farm-to-market freight in traffic – and an opportunity. In many cases local travelers use the State Highway System (SHS) for short trips because local networks are incomplete or disconnected. Creating better-connected, multimodal networks off the SHS offers options for travelers to make more direct trips, sometimes by non-auto modes, reducing not only VMT but pressures to add expensive highway capacity. The planning literature cites "intersection density" as a measure of connectivity, and one that indicates lower VMT. Assisting owner-operators of local networks could thus reduce the need for highway capacity and mitigation and may provide mitigation opportunities where needed as well.

<u>Factors to consider</u>:

- Origins and destinations of travelers in a corridor or on a facility.
- Gaps and other identified needs in the local modal networks.

Ways to measure impacts:

- Needs and gaps can be demonstrated through the use of big data, to examine origins and destinations of travelers, and circuity of routing. Where travelers are diverting significantly from direct routes, or where they are nearly all driving despite origins and destination that are close by, improvements in the auto and active transportation networks are worth considering.
- Accessibility tools can measure gaps in the multimodal systems as well, comparing existing accessibility to ideal accessibility where origins and destinations are linked directly.
- Local network improvements could help to reduce the need for capacity increasing improvements on the SHS and are more likely to be screened out of an analysis for induced VMT.

Traffic Operations and Transportation Safety

Caltrans has a vision to eliminate fatalities and serious injuries on California's roadways by 2050 and provide safer outcomes for all communities. We encourage the City to help realize this vision by committing to the following:

- Adopt a safety-first mindset that prioritizes road safety.
- Prioritize the elimination of fatal and serious injury crashes through existing safety improvement programs along with development and implementation of new programs to enhance the safe use of our roadways.
- Eliminating race-, age-, ability- and mode-based disparities in road safety outcomes.

We recommend that the City include a discussion about traffic safety and traffic safety goals in the Transportation and Circulation Element of the General Plan/Project. If the City is not already actively engaged in monitoring progress toward zero deaths, we recommend including an examination of Actual Collision Rates to Average Collision Rates where data is available to help establish priorities for addressing safety.

We encourage the City to include a section in the Transportation and Circulation Element that identifies any future planned, programmed, or potential projects that may benefit traffic safety or related traffic operation improvements.

With the projected increase in population over the time frame of the plan update, we request to review the City's traffic volumes at buildout.

We suggest including a section in the Transportation and Circulation Element that examines signal warrants for any locations expected to be impacted with a significant increase in travel demand. The need for any capital projects, including new intersection traffic control measures, are likely of interest to the Region and the State especially when discretionary funding will be pursued.

Parking Management

Parking management is considered to have a significant influence on Vehicle Miles Traveled. Parking management may be most effective when integrated with multifamily residential or employment land uses, in the form of parking fees or capacity limitations. When coupled with higher density housing or employment, it may be possible to achieve VMT benefits from parking management outside of specific land uses, though the calculations would be more complex. If the City enforces parking minimums for any land use types, etc., and would require exceptions for major capacity limitations.

Factors to consider:
- Standard parking-demand rates (assuming unlimited free parking).
- Type and degree of parking management (extent of capacity limitation, amount of fees).

Ways to measure impacts:
- CAPCOA promotes the use of the "ITE Parking Generation Manual" to reduce VMT by as much as 13.7 percent for limiting free parking for residential land uses if abundant free parking is not otherwise available in the vicinity.
- The use of parking fees or charges at residential land uses can help to reduce VMT by as much as 15.7 percent. For more details, see CAPCOA, pp. 126-9.

CAPCOA's "Quantifying Greenhouse Gas Mitigation Measures" and "Model Policies for Greenhouse Gases in General Plans " can be found online: <http://www.capcoa.org/documents/>.

We welcome the opportunity to assist the City with goals to plan and build a safe, efficient, and sustainable transportation system for City of Arcata residents now and for the future. Please contact me with questions or for further assistance at: (707) 684-6879 or by email at: <jesse.robertson@dot.ca.gov>.

Sincerely,

Jesse G. Robertson

Jesse Robertson
Transportation Planning
Caltrans District 1

c: State Clearinghouse
Netra Khatri, Arcata City Engineer
Beth Burke, Director, Humboldt County Association of Governments
Greg Pratt, General Manager, Humboldt Transit Authority