EVALUATION OF IMPACT OF TRANSIT-ORIENTED AFFORDABLE HOUSING ON TRAVEL DEMAND

I. OBJECTIVE

Affordable housing in transit-oriented developments has been recognized as a potential travel demand reduction strategy. However, to date very limited empirical, peer-reviewed research has evaluated the impact of preserving or building affordable housing on travel behavior and associated greenhouse gas (GHG) emissions. The objectives of the research project are to evaluate the impact that preserving and building affordable housing in transit-oriented areas has on travel demand and vehicle miles traveled (VMT), and to assess the economic, health, and well-being impacts on the associated residents.

II. BACKGROUND

The preservation and development of affordable housing opportunities near public transit is a land use planning strategy that is thought to increase viability of the public transit system, and provide mobility options to populations with the greatest need. Affordable housing is also thought to reduce vehicle travel demand. The California State Budget allocated $130 million of the 2014/2015 proceeds from Cap and Trade to support an Affordable Housing and Sustainable Communities Program, part of which will fund affordable housing projects near transit stations in order to reduce GHG emissions.

While there is a general understanding that income and socioeconomic characteristics influence vehicle ownership and VMT, there has been limited research to confirm whether increasing affordable housing in transit-oriented areas actually reduces VMT. A few attempts to understand the impacts of affordable housing on VMT have relied on cross-sectional analysis of household travel survey data and smog check odometer readings from the Department of Motor Vehicles. Additionally, a Caltrans-funded project that aims to develop a trip generation methodology for multifamily housing proposes to survey travel behavior of subsidized housing dwellers; however, this project is not designed to assess the effectiveness of affordable housing as a VMT reduction strategy (i.e. does not use a control/counterfactual) nor will it assess the potential for co-benefits of affordable housing. A novel research effort is needed that 1) provides an empirical, quantitative analysis of the impact of preserving and building affordable housing on VMT in California; 2) utilizes a methodology that contains an appropriate business-as-usual counterfactual or control with which to compare the impacts of affordable housing; 3) employs qualitative research methods to assess the health, economic, and well-being impacts of affordable housing.

The results of this research will provide data and information to metropolitan planning organizations, county and local city planning departments, housing agencies, and local climate action planning efforts on the efficacy of transit-oriented affordable housing as a VMT and GHG reduction strategy. In addition, the results can aid in the evaluation of affordable housing projects funded by the Cap and Trade auction proceeds, and inform future Cap and Trade proceeds investment plans.

III. Scope of Work

This research project will build upon the existing body of work done in this area to develop and employ data collection and analysis methodologies to quantify the VMT impact of preserving and building affordable housing in transit-oriented areas. It will also qualitatively assess the potential additional impacts of affordable housing on the health, economic situation, and general well-being of affordable housing residents. This project will:

- Complete a review of the relevant literature and current research efforts;
- Develop and implement a methodology to quantify the VMT and travel impacts of affordable housing, including:
    - Develop an appropriate operational definition of affordable housing in collaboration with ARB, the Department of Housing and Community Development, Caltrans, and other appropriate state agency stakeholders;
    - Identification of appropriate actual housing dwellings for the study in consultation with ARB and other State and regional stakeholders;
    - Collection of travel behavior data from residents of transit-oriented affordable housing units and other dwelling types as required, or use of pre-existing survey data if appropriate;
    - Methodological consideration of an appropriate counterfactual in consultation with ARB. This could be addressed using before/after experimental/control research design, case-control design, or some other method;
    - Evaluation of travel behavior effects among different income-level categories (e.g. very-low income; low income; moderate income).
- Develop and implement a qualitative methodology to assess the impacts of affordable housing on residents' health, economic situation, and overall well-being.
- If appropriate and feasible, partner with regional, local government stakeholders, housing developers, and/or community organizations to assist with project design, data collection, and utilization of results.

IV. Deliverables

- Quarterly progress reports and conference calls;
- Draft final report;
- Peer-reviewed publication(s), as appropriate;
- Final report and research seminar in Sacramento;
- All data and analyses generated through the course of this project;
- Additional deliverables to be determined in consultation with ARB staff.

V. Timeline and Budget

It is anticipated this project will be completed in 30 months from the start date. This allows 24 months for completion of all work through delivery of a draft final report. The last 6 months are for review of the draft final report by ARB staff and the Research Screening Committee (RSC), modification of the report by the contractor in response to ARB staff and RSC comments, and

delivery of a revised final report and data files to the ARB. The estimated budget for this project is $300,000.