

Mitigation Program Study







Mitigation Program Study



### **Agenda**

- Introductions
- Study Purpose
- History/ Background
- What is a VMT Bank?
- Feasibility/ Requirements
- Approach and Work Plan
- Schedule
- Questions/Other?



Mitigation Program Study



# What's your role

- Represent your agency/stakeholders
- Attend 4 meetings
- Review interim work products
- Provide direction



# Regional VMT Mitigation Program Study



### **Project Purpose**

To determine the feasibility of a Regional VMT Mitigation Program for the Fresno Region.



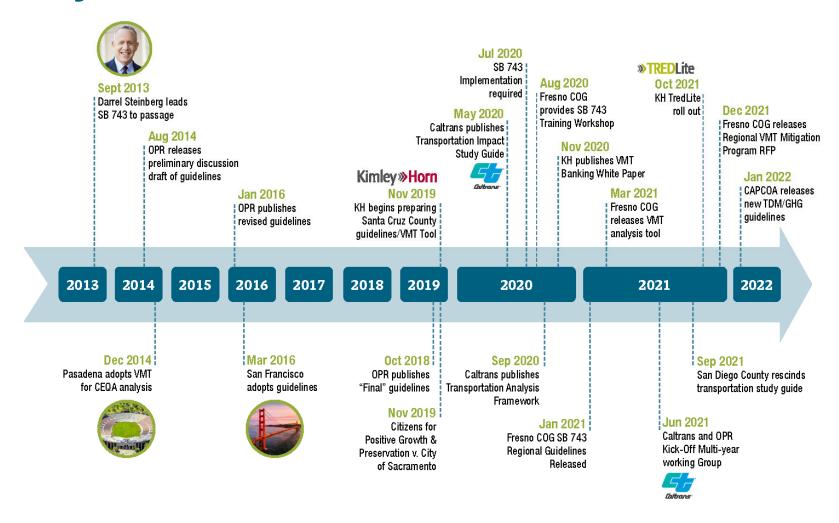
Mitigation Program Study



### **SB 743 Overview**

- SB 743 is CEQA Specific
- Basis for a "transportation significant impact" determination
- Sustainability and GHG reduction by
  - Denser infill development
  - Reducing single occupancy vehicles
  - Improved mass transit
- Most recent guidance is from December 2018
- Recommends that land uses be split out
- VMT is the principal metric

### **History of SB 743**





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### **CEQA** and Mitigation

- Mitigation must be <u>effective</u> and <u>enforceable</u>
- "Effective" mean avoid or reduce a significant impact
- "Enforceable" means they are included in:
  - · Condition of approval in a permit; or
  - Agreement; or
  - Incorporated into a plan, policy, regulation or design
- Infeasible Mitigation
  - "Reasonably prudent person would not..."
  - Provide evidence when refuting a possible mitigation
- Mitigation Monitoring
  - MMRP (Mitigation Monitoring and Reporting Program)
  - · Why? What? Who? Where? When?



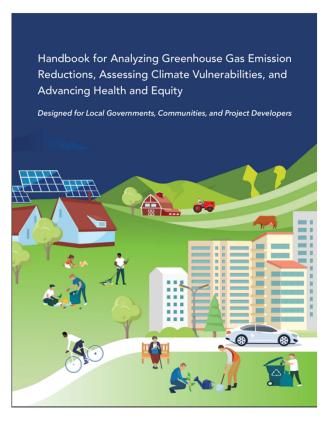


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### **VMT Mitigation/ TDMs**

- Land Use
  - Jobs/Housing balance (mixed use and/or proximity)
  - Infill retail
- Transportation Demand Measures
  - Van pools/ guaranteed rides
  - Flexible work schedule
  - Transit passes and/or transit improvements
  - First mile Last mile
  - Alternate modes incentives and improvements
- VMT Banking and Exchanges
- Monitoring improvements





# Regional VMT Mitigation Program Study



### **CAPCOA Transportation Demand Measures**

- Overview of approaches along with "Fact Sheets"
- Research is sometimes limited
- Diminishing returns can result in exponential cost
- Requires interaction with end-user
  - Problem when there is a firewall with EIR
  - Complicated discussions that can lead to significant expense
- Mitigation Monitoring is a challenge
  - Theoretically can be required in perpetuity
  - Tube counts at driveways
  - Sunsetting requirements

#### T-8. Provide Ridesharing Program



#### **GHG Mitigation Potential**



Up to 8.0% of GHG emissions from project/site employee commute VMT

#### Co-Benefits (icon key on pg. 34)





Climate Resilience







Ridesharing programs could result in less traffic, potentially reducing congestion or delays on major roads during peak AM and PM traffic periods. When this reduction occurs during extreme weather events, it better allows emergency responders to access a hazard site. Lower transportation costs would also increase community resilience by freeing up resources for other purposes.

#### **Health and Equity Considerations**

Program should include all onsite workers, such as contractors, interns, and service workers. Because ridesharing is vehicle-based, and some employees may not be in areas with feasible rideshare networks, design of programs need to ensure equitable benefits to those with and without access to rideshare opportunities.

#### **Measure Description**

This measure will implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers. Ridesharing encourages carpooled vehicle trips in place of single-occupied vehicle trips, thereby reducing the number of trips, VMT, and GHG emissions.

#### Subsector

Trip Reduction Programs

#### Locational Context

Urban, suburban

#### Scale of Application

Project/Site

#### Implementation Requirements

Ridesharing must be promoted through a multifaceted approach. Examples include the following.

- Designating a certain percentage of desirable parking spaces for ridesharing vehicles.
- Designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles.
- Providing an app or website for coordinating rides.

#### **Cost Considerations**

Costs of developing, implementing, and maintaining a rideshare program in a way that encourages participation are generally borne by municipalities or employers. The beneficiaries include the program participants saving on commuting costs, the employer reducing onsite parking expenses, and the municipality reducing cars on the road, which leads to lower infrastructure and roadway maintenance costs.

#### **Expanded Mitigation Options**

When providing a ridesharing program, a best practice is to establish funding by a non-revocable funding mechanism for employer-provided subsidies. In addition, encourage use of low-emission ridesharing vehicles (e.g., shared Uber Green).

This measure could be paired with any combination of the other commute trip reduction strategies (Measures T-7 through T-13) for increased reductions.



T-8. Provide Ridesharing Program





#### **GHG Reduction Formula**

 $A = \mathbf{B} \times \mathbf{C}$ 

#### **GHG** Calculation Variables

ID	Variable	Value	Unit	Source
Outp	out			
A	Percent reduction in GHG emissions from project/site employee commute VMT	0-8.0	%	calculated
User	Inputs			
В	Percent of employees eligible for program	0-100	%	user input
Cons	stants, Assumptions, and Available Defaults			
C	Percent reduction in employee commute VMT	Table T-8.1	%	SANDAG 2019

Further explanation of key variables:

- (B) This refers to the percent of employees that would be able to participate in the program. This will usually be 100 percent. Employees who might not be able to participate could include those who work nighttime hours when transit and rideshare services are not available or employees who are required to drive to work as part of their job duties. This input does not refer to the percent of employees who actually participate in the program.
- (C) The percent reduction in employee commute VMT by place type is provided in Table T-8.1 in Appendix C. The reduction differs by place type because the willingness and ability to participate in carpooling is higher in urban areas than in suburban areas. Note that this measure is not applicable for implementation in rural areas (SANDAG 2019).

#### **GHG Calculation Caps or Maximums**

Measure Maximum

(Amas) The maximum GHG reduction from this measure is 8 percent.

Subsector Maximum

 $(\sum A_{max_{T.5} \, brough \, T.13} \le 45\%)$  This measure is in the Trip Reduction Programs subsector. This subcategory includes Measures T-5 through T-13. The employee commute VMT reduction from the combined implementation of all measures within this subsector is capped at 45 percent.

**Mutually Exclusive Measures** 

If this measure is selected, the user may not also take credit for either Measure T-5 or T-6. However, this measure may be implemented alongside other individual CTR measures (Measures T-7 and T-9 through T-13). The efficacy of individual programs may vary highly based on individual employers and local contexts.



#### **Example GHG Reduction Quantification**

The user reduces employee commute VMT by requiring that employers of a project provide a ridesharing program to their employees. In this example, the percent of employees eligible (B) at a packaging and distribution center is 50 percent and the place type of the project is urban (C). GHG emissions from employee commute VMT would be reduced by 4 percent.

 $A = 50\% \times -8\% = -4\%$ 

#### **Quantified Co-Benefits**



Improved Local Air Quality

The percent reduction in GHG emissions (A) would be the same as the percent reduction in NO<sub>x</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, and PM. Reductions in ROG emissions can be calculated by multiplying the percent reduction in GHG emissions (A) by an adjustment factor of 87 percent. See Adjusting VMT Reductions to Emission Reductions above for further discussion.



Energy and Fuel Savings

The percent reduction in vehicle fuel consumption would be the same as the percent reduction in GHG emissions (A).



VMT Reductions

The percent reduction in VMT would be the same as the percent reduction in GHG emissions (A).

#### Sources

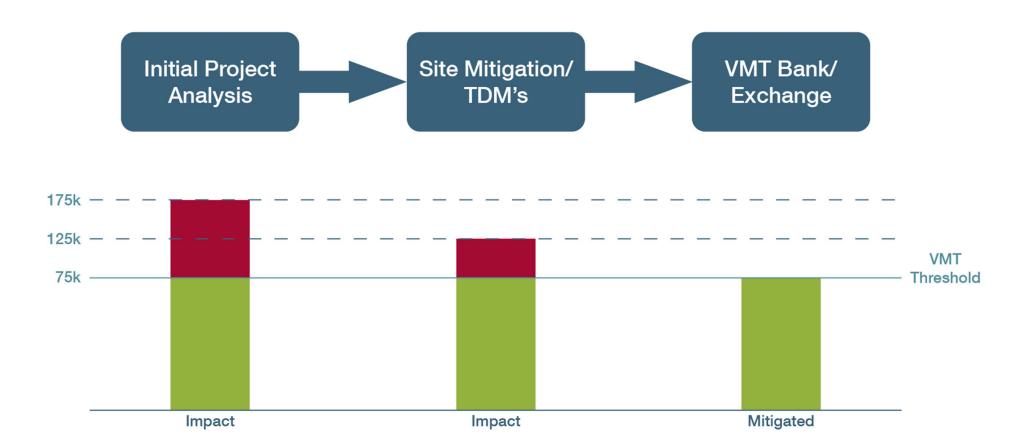
 San Diego Association of Governments (SANDAG), 2019, Mobility Management VMT Reduction Calculator Tool-Design Document. June. Available: https://www.icommutesd.com/docs/defaultsource/planning/tool-design-document\_final\_7-17-19.pdf?sfvrsn=ec39eb3b\_2. Accessed: January 2021.

# Fresno VMT Mitigation Guidance

Table D - Vehicle Miles Traveled Mitigation Measures for Land Development Projects

ľ	Mitigation Measure	VI		Local VMT Reduction Calculations (Local Data/Fresno COG ABM) <sup>2</sup>	CAI	PCOA <sup>3</sup>	OPR TA	Los Angeles Metro <sup>5</sup>	City of San Jose <sup>6</sup>	City of Los Angeles <sup>2</sup>	San Diego Region <sup>8</sup>	Notes
a alai	The state of the s		and the		_							
_	ation Measures with Percentage VMT Reductions calculated using Fresno COG ABM/Locally availated using Fresno COG ABM/Locally availated using Fresno COG ABM/Locally availated to the Communication of the Route (Reduction of a New Route)	Т	02% - 3.20%	Information included in the Fresno County SB 743 Implementation Regional Guidelines - Technical Documentation		Y	Y	Y	N	N	Y	Notes: CAPCOA TST-1 (Applicable in urban and suburban context; negligible in rural context; appropriate for specific or general plans). This can be considered under Technical Advisory Measure 'improve pedestrian or bicycle networks, or transit service.'
2	Provide a Bus Rapid Transit System (Substitution of an Existing Bus Route with a BRT Route)	0.0	02% - 3.20%	Information included in the Fresno County S8 743 Implementation Regional Guidelines - Technical Documentation		Y	¥	Y	N	N	Ÿ	Notes: CAPCOA TST-1 (Applicable in urban and suburban context; negligible in rural context; appropriate for specific or general plans). This can be considered under Technical Advisory Measure "Improve pedestrian or bicycle networks, or transit service."
3	Implement a local carpool program	1.0	00% – 15.00% commute VMT	Information included in the Fresno County 58 743 Implementation Regional Guidelines - Technical Documentation		Y	Y	¥	Ÿ	Y	¥	Notes: CAPCOA TRT-3 [Provide Ride Sharing Programs: applicable in urban and suburban context; Regligible impact in many rural contexts, but can be effective when a large employer in a rural are advest from a workfore; in an urban or suburban area, such as when a major employer moves from an urban location to a rural location; appropriate for residential, retail, office, industrial, and mixed-use projects); City of San loce [Ride share for employment uses only]; City of LA [Measured in terms of employees eligible [%]]
4	Implement a local vanpool program	TR 7.3	30% - 13.40% commute VMT reduction (for CAPCOA RT-11: Provide Employer-Sponsored Vanpool/Shuttle); 20% - 15.80% school VMT reduction (for CAPCOA TRT- 00: Implement a School Pool Program)	Information included in the Fresno County 58 743 implementation Regional Guidelines - Technical Documentation		Y	Y	¥	¥	Y	Y	Notes: Similar to CAPCOA TRT-11 [Provide employer-sponsored vanpool/shuttle] - the measure is applicable for urban, suburban, and rural context, and is appropriate for office, industrial, and mideed use projects; fory of San Jose (Simal measure is Subdiste Vanpool); City of LA [Similar measure is Employer sponsored vanpool or shuttle (Degree of mplementation (low, medium, high), employees eligible (Ki), employer size (small, medium, large)]
5	Expand transit network (Addition of a New Transit Line)	0.:	10% - 8.20%	Information included in the Fresno County SB 743 Implementation Regional Guidelines - Technical Documentation		Y	Y	¥	¥	Y	Y	Notes: CAPCOA TST-3; Measure applicable in urban and suburban context, maybe applicable in rural context but no literature documentation available, appropriate for specific or general plans. This can be considered under Technical Advisory Measure (improve pedestrian or bicycle networks, or transit service; 'City of Sn Jose [Increase transit accessibility to improve last-mile transit connections, improve network connectivity/design to make destinations and low-carbon travel modes accessible; both applicable for both residential and employment uses); City of LA [Existing transit mode harde sa a percent of total daily trips) (%), Lines within project site improved (<50%, >>50%))
Mitig	ration Measures with Percentage VMT Reductions from CAPCOA only											
6	Incorporate bike lane street design (on-site)	pe M 7h inc pe	is increase in share of workers commuting by cycle (for each additional mile of bike lanes er square mile) (Bicycle Commuting and Facilities in the state of the state of the state of the state of the hem – Another Look by Dil and Carr (2003)); 0.075% crease in bicycle commuting with each mile of bisevery er 100,000 residents (if You Build Them, Commuters All User Them; Cross-Sectional Analysis of Commuters and Bicycle Facilities by Nelson and Allen (1997))	Information included in the Fresno County SB 743 Implementation Regional Guidelines - Technical Documentation		Y	Y	¥	¥	Y	Y	Notes: CAPCOA SOT-5 (Grouped strategy, benefits of Bike Lane Street Design are small and should be grouped with the LUT-9 (improve Design of Development) strategy to strengthen street network characteristics and enhance multi-modal environments, the measure is applicable in unban and suburban contests and is appropriate for residential, retall, office, industrial, and mixed-use projects. This can be considered under Technical Advisory Measure Improve pedestrian or bicyde networks, or transit service; City of San Jose [Espand the reach of bibe access with investment in Infrastructure: applicable for both residential and employment uses]; City of LA [Provide bicyde facility along site (Yes/No)]
7	Subsidize vanpool	0.	.30% - 13.40% commute VMT	N/A		Y	Y	N	¥	Y	¥	Notes: CAPCOA TRT-11 (Provide employer-sponsored vanpool/shuttle) - the measure is applicable for unkn, suburban, and rurat context, and is appropriate for office, industrial, and mixed-use projects), City of San lose [Subsidize Vanpool); City of LA [Imployer sponsored vanpool or shuttle (Degree of Implementation (low, medium, high), employees eligible (%), employers size (mail, medium, large).
8	Improve or increase access to transit	tra	APCOA TST-2: Not quantified alone, grouped strategy th TST-3: Expand transit network' and TST-4 'horcease anust service frequency/speed'; CAPCOA LUT-5: 0.50% - 8.60%	N/A		Y	Y	>	¥	Y	Y	Notes: CAPCOA TST-2: Implement Transit Access improvements (applicable in urban and suburban context, and appropriate for residential, retal, office, mixed use, and industrial projects); CAPCOA LIT-5: increase Transit Accessibility (May be grouped with CAPCOA measures LIT-3 (mixed use development), SDT-2 (traffic calmed streets with good connectivity), and PT-11 through PT-7 (parking management strategies) in measures are applicable in urban and suburban contexts; appropriate in rural context if development site is adjacent to a communiter all station with convenient rail service to a major employment center; appropriate for residential, retal, office, industrial, and mixed-use projects]; City of San lose [Increase transit accessibility to improve last hard transit connections; Improve network connectivity/design to make destinations and low-carbon travel modes accessible; both applicable for both residential and employment use; City of LA (Esixing transit mode share (as a percent of total daily trips) (%), Lines within project site improved (<50%, >>50%)

# **Fee Based VMT Programs**





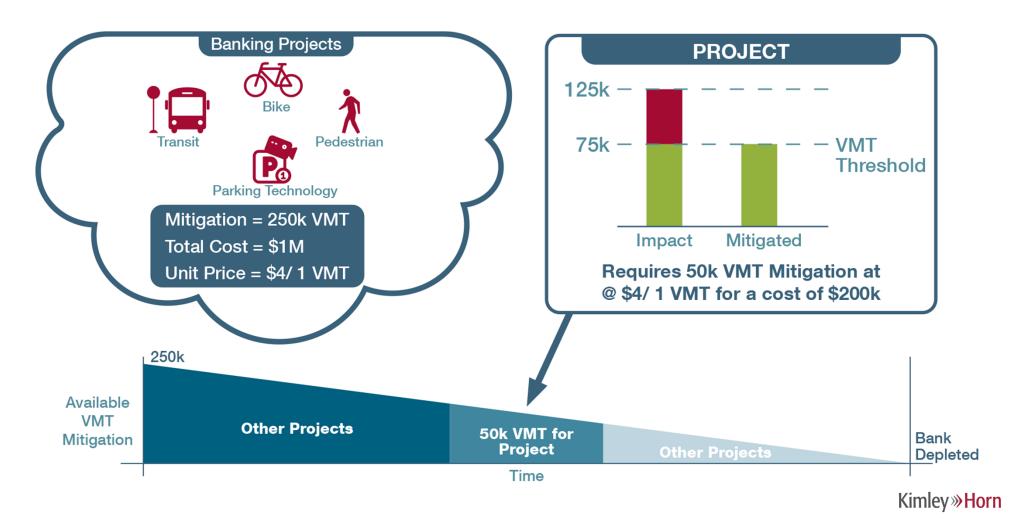
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### **Fee Based VMT Program Options**

- VMT Banking Multiple projects grouped together and monetized for mitigation
- VMT Exchanges Single project established by applicant/other for mitigation
- VMT Mitigation Impact Fee Programs Everyone participates to reduce VMT
- Hybrid Banking and Exchange
- Local plus Regional Projects

# **How VMT Banking Works**

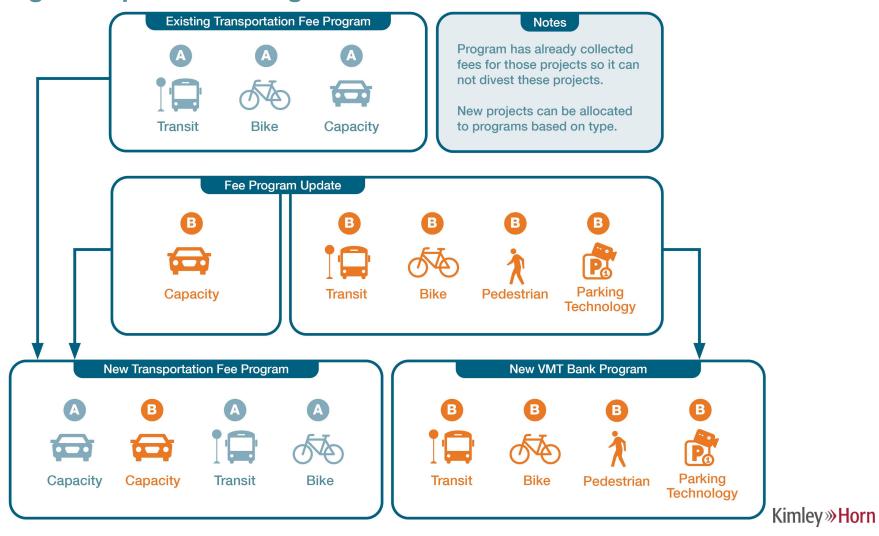


### **Rethinking Transportation Programs**

	Example 1 – 100 SFR Not	Requiring VMT Mitigation	Example 2 – 100 SFR Requiring VMT Mitigation			
Program	Traffic Fee Program	VMT Banking/Exchange	Traffic Fee Program	VMT Banking/Exchange		
MOE	DU Equivalency (Based on Trips)	VMT	DU Equivalency (Based on Trips)	VMT		
Input Consideration	100 Units	14 VMT/Capita	100 Units	18 VMT/Capita		
Threshold n/a		15 VMT/Capita	n/a	15 VMT/Capita		
Required Offset	100 DU	n/a	100 DU	(18 VMT/capita -15 VMT/ capita)*100 Units = 3,000 VMT		
Cost*	\$10,000 per DU Equivalent	\$100/ VMT	\$10,000 per DU Equivalent	\$100/ VMT		
Outcome	\$1,000,000 Payment with Building Permit	n/a	\$1,000,000 Payment with Building Permit	300,000 Payment Required as a Condition of Approval		
Total Cost	\$1,00	0,000	\$1,300,000			

<sup>\*</sup>Assumes a single benefit area for Traffic Fee ProgramBased on a single benefit area

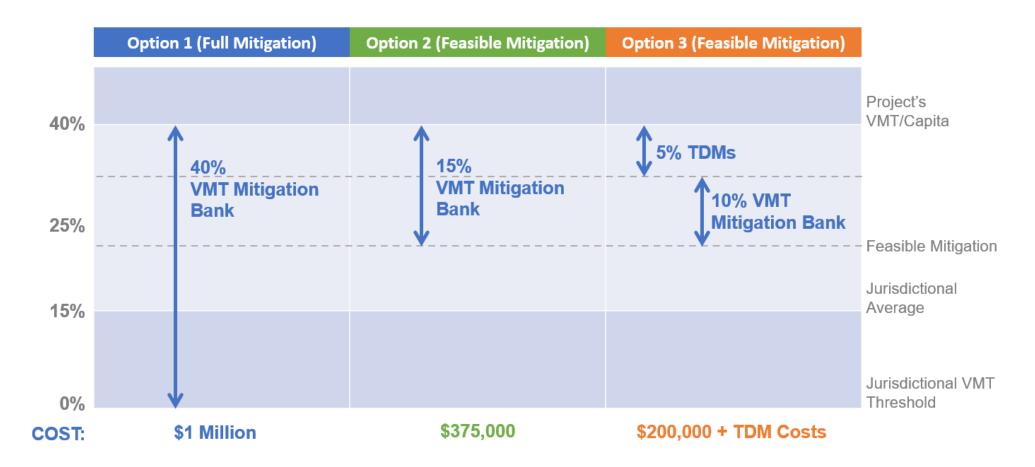
#### **Rethinking Transportation Programs**



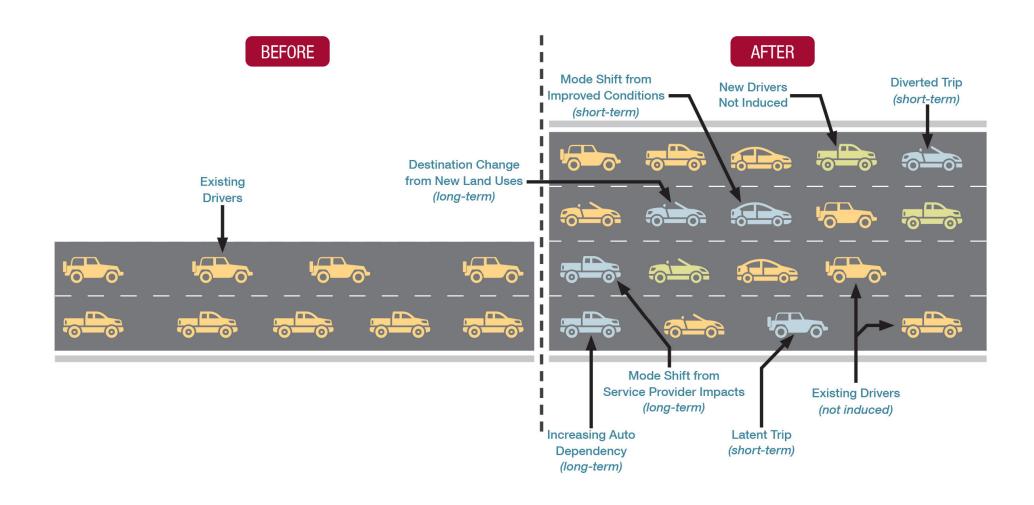
# **Fee-Based VMT Mitigation Program Requirements**

Ø	Targeted	Designed for projects which require mitigation
\$	Effective	Identified mitigation solutions need to be financially viable and feasible
+	Additionality	Mitigation must be new and not repurposed from other funded programs
<b>7.</b>	Roughly Proportional	Mitigation "units" must be appropriately sized/priced to offset the impact
	Legal	Local and other jurisdictional legal frameworks need to be vetted
Equity		Mitigation should both avoid disproportionate impacts and benefits should be fairly distributed
?	Unintended Consequences	Mitigation should not discourage good design or contradict community values

#### **Feasible Mitigation**



#### **Induced Demand**



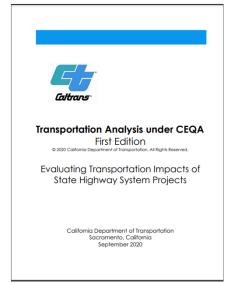


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# **Transportation Project Mitigation**

- Induced demand often results in significant impacts
- Caltrans and other road building agencies are in trouble
- Feasible mitigation is still required
- Will likely result in fewer roadway widenings
  - Example 1: Freeway adds rail through its median to offset
  - Example 2: Freeway project buys VMT banking credits to offset



"There will be a need for cost-effective, feasible, and proportional VMT mitigation measures, not just for Caltrans' projects, but for local lead agencies statewide that must comply with CEQA. Caltrans may ultimately develop or participate in a VMT credit or banking and exchange system operated by Caltrans, an MPO, RTPA, or another entity. Under a banking system, Caltrans could purchase mitigation credits to reduce project impacts related to VMT. The revenues from the credit purchases could be utilized by the bank to facilitate the development of VMT-reducing projects. For example, the bank could invest in infrastructure improvements such as pedestrian facilities or aid in the development of regional transportation options, such as light rail. An exchange system might be similarly structured. In exchange for implementing a project that induces VMT, Caltrans would invest in a project identified by a local or regional transportation partner that reduces VMT. One example of a system that relies on VMT reduction as a nexus is the City of Los Angeles Westside Mobility Plan Transportation Impact Fee Program"



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# VMT Banking Legal Requirements

- Must meet requirements for both the Mitigation Fee Act and CEQA
  - Need more than a report showing a nexus and rough proportionality
  - VMT reduction projects must be additional
  - Need to be in place in a reasonable time frame
- The VMT Mitigation Program is a project that requires CEQA clearance
  - Possibly with CEQA exemptions
- Many parallels to VMT mitigation programs and GHG mitigation programs
  - GHG CEQA caselaw provides guidance on the features needed to pass legal muster



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# Mitigation Fee Act (AB 1600)

- Mitigation Fee Act program include VMT Bank/Exchange
  - · Developers pay fees in lieu of building infrastructure
  - Many programs allow for direct construction of infrastructure with credit against fees owed
- Key change is the currency, from trips to VMT
- Bank, Exchange, or other is not necessarily a dichotomy
- Any fee program will continue to require nexus and proportionality
- Nexus will need to demonstrate balance between mitigation and impact
- Proportionality needs to form the basis for calculating the mitigation cost

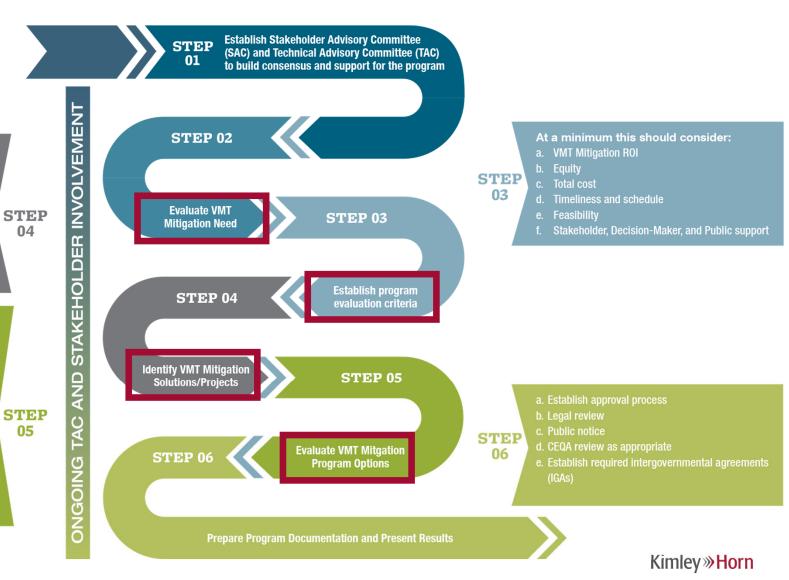


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### **Work Plan**

- Task 1. Convene a Stakeholder Advisory Committee (SAC)
- Task 2. Literature Review
- Task 3. Convene a Technical Advisory Committee (TAC)
- Task 4. Develop VMT Mitigation Framework
  - Task 4A: Estimation of Mitigation Need
  - Task 4B: Develop Evaluation Criteria
  - Task 4C: Identify VMT Framework Options
- Task 5. Evaluate and Recommend VMT Mitigation Frameworks
- Task 6. Develop and Publish Draft Report
- Task 7. Present Project Report to Committees and Policy Board for Acceptance



a. VMT Banking

- b. VMT Exchanges
- c. VMT-Based Impact Fee
- d. Hybrid (example VMT Banking with additional fixed menu of local VMT mitigation options not included as specific projects)
- e. Phasing of VMT selected program if appropriate

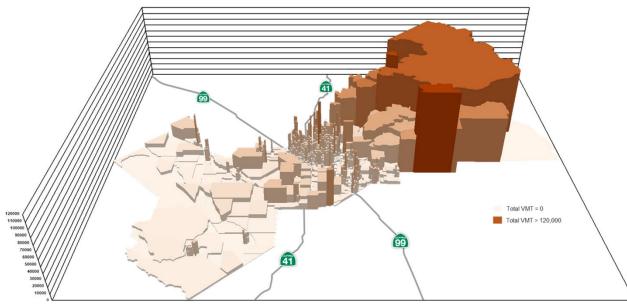
#### At a minimum this should consider:

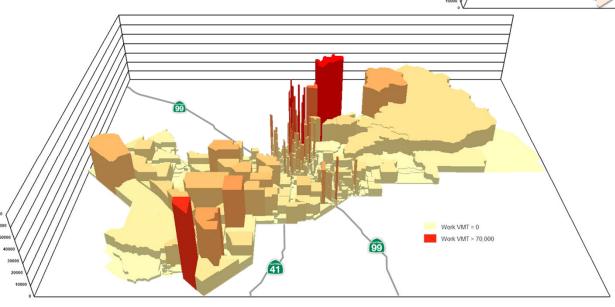
- a. Identifying the location and likely timing of future development and transportation projects
- b. Screen projects to determine mitigation requirements
- c. Determine the extent of "feasible mitigation" (the maximum reasonable contribution, irrespective of the actual required VMT mitigation)
- d. Evaluation of the impact to project feasibility, affordability, other financial considerations

**STEP** 05

04

# **Evaluate VMT Mitigation Need**





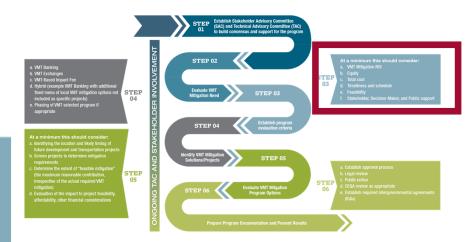
2035 Daily VMT Summary for Anticipated Growth	Totals (13% Threshold)
Households under Threshold	41,257
Households over Threshold	39,163
Employment under Threshold	26,335
Employment under Threshold	15,500

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### **Establish Program Evaluation Criteria**

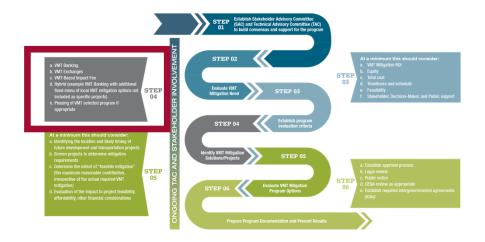
#### At a minimum this should consider:

- a. VMT Mitigation ROI
- b. Equity
- c. Total cost
- d. Timeliness and schedule
- e. Feasibility
- f. Stakeholder, Decision-Maker, and Public support



# **Identify VMT Mitigation Solutions/Projects**

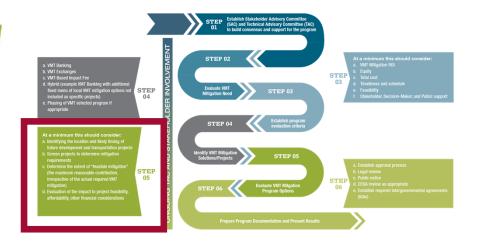
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# **Evaluate VMT Mitigation options**

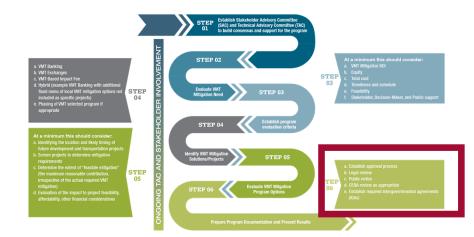
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### **Prepare Program Documentation and Results**

- a. Establish approval process
- b. Legal review
- c. Public notice
- d. CEQA review as appropriate
- e. Establish required intergovernmental agreements (IGAs)





# Regional VMT Mitigation Program Study



# VMT Mitigation Bank/Exchange – Lessons Learned

- Be selective about projects (ROI)
- Focus on feasible mitigation
- Iterative Process (Test, test, test)
- Documentation of nexus
- Consider applicants' perspective
- Consider Equity
- Adds a new fee
- Quantify the market/ timing need
- Unintended Consequences



Return on Investment



Benefits All



Think Through Program Designs

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### **Documents/Programs Reviewed**

- An Analysis of Vehicle Miles Traveled Banking and Exchange Frameworks
- VMT Mitigation Through Fees, Banks, and Exchanges
- A Transaction-Based Alternative for VMT Mitigation Under CEQA
- The Potential for Regional Transportation Impact Mitigation Fee Programs and Mitigation Banks to Help Streamline the Implementation of SB 743
- San Diego Citywide Active Transportation In Lieu Fee Program Estimated Impacts and Cost Savings
- City of San Jose Council Policy, Transportation Analysis Policy
- Contra Costa Transportation Authority, Press Release
- Tahoe Regional Planning Agency, Mobility Mitigation Fee Update
- Standards for the Transportation Demand Management Program
- San Francisco Transportation Sustainability Fee (TSF)
   Nexus Study
- City of Pasadena Department of Transportation, Mobility Element
- Transportation Impact Assessment (TIA) Fee Program

- Study for Coastal Transportation Corridor Specific Plan and West Los Angeles Transportation Improvement and Mitigation Specific Plans Amendment Project
- VMT Mitigation Through Fees, Banks, and Exchanges
- Bay Area Express Lanes Strategic Plan
- California Department of Fish and Wildlife, Conservation and Mitigation Banking
- Setting the Stage for Statewide Advance Mitigation in California
- California Legislative Information, AB 602 Development Fees: Impact fee nexus study
- Equity in Off-Site Vehicle Miles Traveled (VMT) Mitigation in California
- Implementing SB 743 An Analysis of Vehicles Miles Traveled Banking and Exchange Frameworks
- VMT Impacts: Can Prior CEQA Documents Be Relied on That Did Not Study VMT Impacts?
- With State VMT Law Limiting Home Building, Clovis Takes Action
- San Diego County Ponders a VMT Tax, with a Twist
- Powering California, ANALYSIS: Vehicle Miles Traveled Tax (VMT)



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### **Literature Review Themes**

- Agencies need to verify VMT reductions and additionality for the program
- Agencies need to address VMT mitigation duration as part of program development
- A VMT exchange could limit the usefulness of funds from smaller developments
- New plans and programs might increase end-user costs
- Attention needs to be given to impacts to disadvantaged communities
- On-site mitigation should be undertaken first
- VMT Banks and Exchanges and comprehensively address VMT impacts

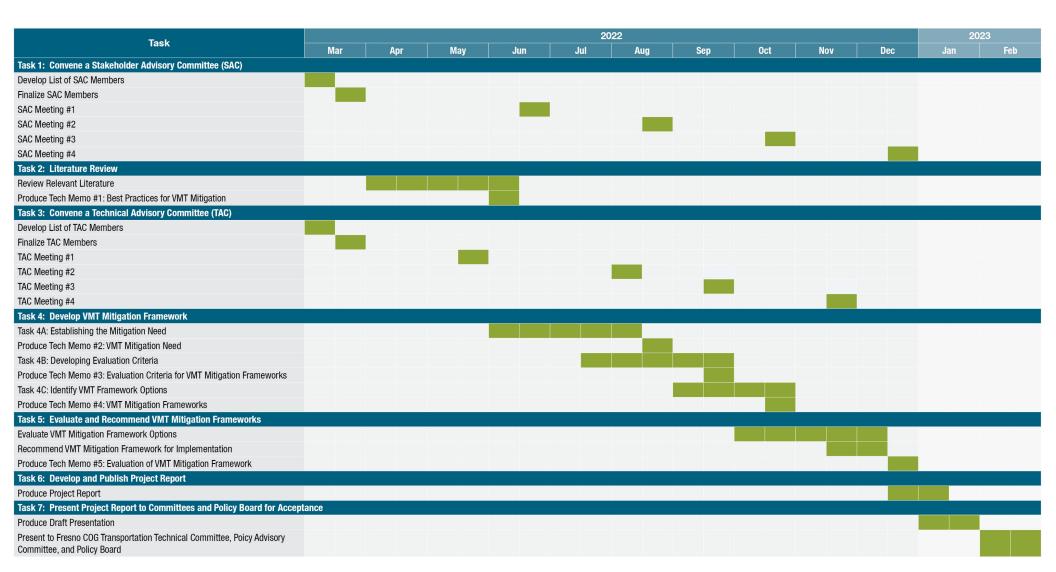






# Take-Aways

- Good project design can avoid mitigation
- CEQA requires <u>feasible</u> mitigation
- TDM research is lagging and estimating VMT reductions is complicated
- TDM mitigation can cause administrative headaches
- VMT impact fees, banking, exchanges, and hybrids are being considered
- VMT banking requires <u>Nexus</u> and <u>Rough Proportionality</u>
- VMT banking can reduce TIFs and provide needed mitigation
- Roadway project mitigation may be a good fit for VMT Banking/Exchanges





# Regional VMT Mitigation Program Study



# **Questions**



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